Harveian Lectures
ON THE
MECHANICAL SYSTEM OF UTERINE PATHOLOGY.

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LECTURE II.

GENTLEMEN,—I now proceed to examine the relation of the various uterine symptoms to the various physical or other changes observed in the uterus.

The physical change in the uterus to which experience has led me to assign the greatest importance is *change of shape* of the uterus. Observation has convinced me that this is the most common and the most troublesome of the maladies to which the uterus is liable. Cases, many in number, which have come under my notice during past years have told one and the same story; almost every new case that presents itself contains proof of the accuracy of the idea in question. *Change of position* of the uterus, another physical alteration, is necessarily associated with the change of shape, for change of shape implies change of position more or less, and it is an exceedingly important element. Change of position may be unassociated with change of shape, and may be important or not according to circumstances which I shall hope by and by more accurately to define. But at this moment attention is directed particularly to the change of shape.

Let us consider for a moment the *normal form of the uterus*. The all-wise artificer of the human frame has given this organ of the body a certain definite form and outline, and has provided it with means for preserving that outline and shape under the ordinary circumstances of life. The form which the uterus possesses is, of course, the best that is possible in view of various physiological requirements, particularly the provision that is made for its enormous expansion and growth during pregnancy. Are we to assume that the preservation of this natural form and shape is a matter of indifference? Are we to suppose that it is a matter of no moment that the uterus should be distorted to such an extent that it is actually doubled on itself, presenting a contracted, shapeless mass? We regard beauty and regularity of the external form of the body as signs of health, and to a remarkable extent it is found that external beauty and health are associated. Are we to imagine that an organ such as the uterus, exquisitely built and fashioned and adapted for various purposes, can have its form and outline altered and distorted, and yet that it should continue to be capable of carrying on healthily and satisfactorily the exceedingly important functions with which it is entrusted in the human economy? These considerations alone would enable us *à priori* to anticipate inconveniences and disasters from such a spoiling of nature's handiwork.

Pain.

The first uterine symptom with which it is necessary to deal is *pain*. An attentive consideration of the various kinds and degrees of pain felt by patients suffering from uterine disease affords information of the most valuable kind. It is very frequently indeed the case that patients consult us solely because they are suffering from pain or uneasiness. They are affected with certain unpleasant sensations from which they desire to be relieved. The relation of pain to various uterine diseases deserves, therefore, particular notice. We have been too much in the habit of disregarding pain as pain. For the most part the presence of pain, when it has been admitted that pain is actual and not imaginary, has been regarded as evidence either that the patient is suffering from "inflammation," or from what is termed "neuralgia." To speak plainly, these names are little more than convenient terms used to disguise ignorance. These terms, as applied to diseases of the uterus, have done service for a long time, but they will no longer fulfil the demands of an exact scientific nosology. It is necessary to trace these pains more definitely to their source. Speaking of pain referable to the uterus, it may be said generally that it is either (1) *spontaneous*, occurring, that is to say, when the patient is at rest; or (2) *it is produced by motion of the body or exertion*. There is a third kind of pain—viz., that produced by touching the uterus, itself—abnormal sensitiveness. The latter phenomenon can only be appreciated when it happens that an examination is made. These several manifestations may be all present together, or they may be observed separately.

Now the remarkable result is made evident by careful clinical observation that change of shape or position of the uterus is the particular alteration with which these pains or painful manifestations are most frequently associated. And it can be shown that, judged by this standard alone—viz., the extent to which painful sensations are produced,—the distortions and displacements of the uterus have a very great practical importance. This is not a matter to be disposed of in a sentence; details must be entered into.

1. *Spontaneous pain.* — In the first place, we may discuss what has above been termed spontaneous pain referable to the uterus. This kind of pain is not common. Cancer of the uterus, fibroid tumours, or growths of fibroid nature within the uterus, may give rise to pain of this character. As is well known, pain referable to the uterus is not generally felt in the uterus itself, but either in the back or front of the pelvis. A favourite position is also one or other of the groins. The uterine spasm—uterine colic, as it has been termed—is felt, or may be felt, both in the back and in the uterine region also. Another condition which ought to be added to the above is pain due to the commencement of acute pelvic inflammation, but this scarcely comes within the limits of the present discussion. Morbid conditions of the bladder, rectum, &c., are of course liable to occasion pain of spontaneous character; but these are cases not coming into notice from our present point of view. Lastly, it must be stated that in certain very severe cases of uterine distortion, accompanied with considerable congestion and irritation internally, spontaneous pain may be observed. Apart from the presence of one or other of these conditions, spontaneous pain is not often witnessed.

2. *Pain on motion.*—The pains referable to the uterus, and produced by motion or by certain positions of the body, are, however, most common, and cases in which such pains are observed are very numerous. It is a singular fact that this very important symptom of uterine disease has attracted so little notice at the hands of uterine pathologists. It is so common a symptom that it is worthy of a special designation. Writing on this subject some years ago, I ventured to characterise the marked cases of this kind as cases of "uterine lameness." This designation is not a very satisfactory one, and, after consideration, I now propose "dyskinesia" as a term better suited for the purpose. I think it will be admitted, on considering the facts of the case, that the introduction of such a term into familiar medical nosology will be likely to be attended with useful results. By dyskinesia, then, is meant an inability on the part of the patient to move about, to walk, or to make various exertions, without experiencing pain more or less severe.

Locomotion excites pain referable to the uterus. The pain so produced may be slight, or it may be violent in degree, but the characteristic of it is that it is brought on by motion. It may be so severe that the patient is practically unable to move at all, or it may be so slight that the patient moves in spite of it, and continues to do so. The patient is able to walk or to move. There is no paralysis in the ordinary sense of the word, but there is a strong disinclination to move in consequence of the suffering known by experience to attend it. It is impossible to question patients suffering from maladies of the uterus as to the nature of their feelings and complainings without recognising the immense preponderance of this particular symptom over others in regard to frequency. The degree of disablement varies exceedingly in different cases. Some patients do not mention it unless they are asked whether they can walk an average distance, or take a moderate walk,

without suffering pain; others can talk of nothing else—the inability to do this, that, or the other, to walk, or to ride, or to visit—these are to them ever-present evils from which they desire deliverance. The disablement is sometimes a most terrible misfortune, the patient being shut off from most of the enjoyments of life, for the simple reason that locomotion is impracticable. Patients consult us for a variety of reasons. In many cases undoubtedly the locomotive disability is not the reason they assign for applying for relief. In a vast number of cases, however, this is the reason impelling them to seek aid, although they are not aware of it, or have at all events not formulated their ideas on the subject with any degree of precision.

The significance of this symptom has been very generally overlooked, partly because it is so common, partly also because the idea has been very frequently entertained by practitioners that this disinclination for taking exercise, for walking, and other kinds of exertion, is a fanciful one—that it should not be treated seriously, being a whim or caprice of the patient, which, in the interest of the patient herself, the practitioner thinks it right not to encourage. I do not say that this is universally the case. Far from it, but probably the substantial truth of this statement will be admitted. According to my experience, however, this view of the matter is erroneous.

That uterine displacements are attended with discomforts is not a new idea. Because they are not absolutely universally attended with discomforts, certain writers have thought themselves justified in saying that uterine displacements are in themselves of no particular importance. But, obviously, the true method of arriving at the truth on this subject would be to inquire how far and how frequently discomforts referable to the uterus, such as the particular one now under consideration—namely, impaired locomotion, or pain produced by locomotion,—can be proved to be connected with uterine distortion and displacement. The two propositions are essentially different, as will be readily admitted when they are concisely stated. Proposition 1: Uterine distortions and displacements invariably give rise to pain on locomotion. Proposition 2: Pain on locomotion of such a kind as to be referable to the uterus is invariably associated with the presence of uterine distortion or displacement. These propositions are not identical, nor are they equally true. The first proposition is more nearly true than is generally imagined. The second proposition is, however, according to my experience, almost absolutely true, and this is the particular point to which I now seek to direct attention.

I have stated that the connexion between uterine distortion and pain on locomotion has attracted little attention at the hands of previous writers. To this statement I must make a noteworthy exception. I was recently much pleased to find that certain very interesting observations bearing on this subject had been made by Chassaignac in his work on Clinical Operative Surgery, published some years ago.[1] Speaking of the relation subsisting between certain morbid conditions of the uterus ("deviations") and the pains and discomforts with which these alterations are associated, he thus expresses himself. Question: What is the cause, says Chassaignac, of the "accidents douloureux" observed in women the subjects of uterine deviation? Answer: The "ballottements" which the deformed or displaced uterus undergoes. Thus two conditions, the deviation and the movement impressed on the organ, must be conjoined in order that the pain may be produced. Further, this author goes on to state his opinion that the reason a particular deviation gives rise to pain in one patient and not in another is, that the *ballottement* is in some way prevented. Also that relief is to be given by curing the deviation or by preventing the *ballottement*. Hence, he says, the horizontal position is so frequently effective in abolishing the pain. Hence also the good effect of pessaries, the benefit derived in some cases from the hypogastric bandages, &c. The uterus is thus brought to a state of rest. It is thus made evident that Chassaignac recognised clinically the connexion above insisted on; and not only so, he endeavours to explain this connexion by the concussion or jarring of the distorted or displaced uterus which motion of the body produces. On this explanation something further will have to be said presently.

[1] Traité Clinique et Pratique des Opérations Chirurgicales, vol. ii., p. 928. Paris, 1862.

Before going further, however, it is necessary to deal with the fact or supposed fact that in some cases uterine distortions do, and in others do not, give rise to painful sensations during locomotion, a circumstance which has had much to do in lending support to fallacious views on this subject; and because occasionally flexions are apparently not causing particular inconvenience to the patient, it has been argued that they are not in themselves of any particular consequence. The facts of the case, according to my own experience, are as follows. Of the various forms of uterine deviation it appears that some are more liable to be attended with pain during locomotion than others. Thus, take first descent of the uterus as a whole, unaccompanied by alteration of shape—cases of prolapsus, as they are termed. Now, it is the fact that such cases are really not attended with so much pain as others to be mentioned presently. It is quite true that when the uterus protrudes externally, this itself is a serious evil, and is attended with grave inconveniences, but when it falls short of this, and the uterus does not protrude externally, the pain experienced may not be very noteworthy. And I have been surprised in some bad cases of external prolapse to find patients complaining comparatively little of difficulty in locomotion. Movement may of course produce in such cases friction, irritation, and ulceration of the exposed organ, but apart from these effects the movement itself may not be accompanied with particular discomfort.

The next form of uterine deviation is version of the uterus, the organ preserving its proper shape more or less perfectly, but being tilted backwards, forwards, or laterally, as the case may be. Now, according to my observation, cases of slight version may be accompanied with comparatively little discomfort. This applies to slight cases of uterine version only, for in cases of severe version, forwards or backwards, the pain produced by locomotion is generally very distressing. Cases of version not accompanied with flexion are, as before stated, not in themselves very common, but it is not very uncommon to meet with cases of slight version together with slight flexion. And in these latter cases the discomforts now under consideration are undoubtedly less severe than in the cases next to be considered.

The next category of cases are those in which there is decided distortion of the uterus generally, also accompanied with a certain degree of version of the uterus. It is in this class of cases that pain produced by locomotion is most extreme and most severe. These are the cases which furnish the instances of marked interference with locomotion, and, with few exceptions, this condition of the uterus is attended with the symptom in question in a more or less marked form. And I do not hesitate to state that I have found the condition and the symptoms associated so very constantly that no room exists in my mind for doubt on the subject. Here we meet, as I have already remarked, with opposing statements as to the value and frequency of the association. Thus one statement is to the effect that it is common enough to meet with cases of flexion in which there is no complaint and no inconvenience felt whatever. I can only say that such cases do not, at all events, present themselves in my practice. There are various ways of accounting for this discrepancy as to a matter of fact.

The first remark to be made in connexion with this subject is, that cases vary very much in severity, and too much has been expected in regard to uniformity of symptoms when the conditions were not uniform. As regards this particular symptom, pain on locomotion, it is one which I have hardly ever found absent when the uterus is actually distorted. This symptom is plainly of importance, but it is not one which has usually been thought much of, and may have been present even to a marked degree in some of the cases, when flexion is said to have occasioned no complaint or inconvenience. Another circumstance, before mentioned, is that, when the flexion is slight, and there is more version than flexion, the pain and inconvenience may be slight in degree. Further, it must be borne in mind that the flexed uterus is not always in the same condition. Sometimes it is much congested; at other times not particularly full of blood. Dr. Braxton Hicks has lately published observations on retroflexion of the uterus, and, in accounting for the differences of opinion on the treatment of this affection, he points out the differences observable at different times in regard to the state of the uterus as accounting for these

diverse opinions. With these remarks of Dr. Hicks I, for the most part, fully concur. The congestion or engorgement is, no doubt, a condition which adds very much to the discomfort which a flexion produces, and in a case where it happened not to be present the discomfort observed might be comparatively trifling. Then, again, the duration of the flexion is a matter affecting painfulness. When the case is one of long standing, the uterus acquires in some cases a kind of toleration of it, and locomotion perhaps ceases to be painful. But even in these cases it is enough to scrutinise the previous history to become aware of facts which tell directly against the notion that flexions ever occur without giving rise to very decided discomfort and inconvenience.

In the cases where pain is produced by locomotion, it is generally the fact that various positions of the body or certain exertions give rise also to pain. Thus, lifting a weight, carrying a weight, stooping to pick up objects from the floor, reaching to hang up an article of dress, riding in a carriage in the ordinary sitting position, riding on horseback, even sitting up to dinner,—any one of these exertions, and a multitude of others that might be mentioned, produce pain more or less severe. The horizontal position is in many cases the only one in which the patient is secure—and sometimes not even then—from pain.

In short, the effect of movements of the body in cases where the uterus is distorted is almost invariably to produce pain or inconvenience more or less marked. This is a most striking fact, and has the greatest significance in estimating the importance of uterine flexions. Why is it, we may ask, that this movement, these exertions, produce pain in cases of uterine flexion? Chassaignac believed it to be on account of the jars or *ballottements* the uterus receives. No doubt this is to some extent true. The flexed uterus is shaken, and the concussion is doubtless in part the cause of the painful sensation. But there is another and far more important effect to which I would direct attention—viz., the temporary exaggeration of the flexion produced by the exertion or motion of the body. It is quite certain that this exaggeration and increase of the flexion does so occur. I have noted it in numberless cases; and it is, I feel convinced, the main cause of the pain. If corroborative evidence were required, it would be easily afforded by carefully investigating any marked case of this kind presenting itself, and inquiring into the effects of this, that, or the other motion in giving rise to pain; the very closest connexion will then be shown to exist between the cause and effect in question. Given a certain kind of uterine flexion—determine what motion or exertion of the body would be likely to exaggerate that flexion; let the patient make that particular exertion, and it will be found to give rise to pain. In fact, investigation into the effects of certain exertions will often lead not only to the diagnosis of the presence of flexion, but to the diagnosis of the nature and variety of the flexion, and actual examination is afterwards found to confirm the diagnosis so made.

Further evidence in the same direction is afforded by the results of placing the uterus, or even by placing the body, in such a position that exaggeration of the flexion cannot be produced by motion. It is observed under such circumstances that pain is no longer produced, or it is at all events very much diminished. By mechanically preventing further increase of the flexion it will be found that motion has no longer the same effect in regard to this particular symptom.

A further question remains to be answered, and it is the most interesting of all—namely, why is it that flexion of the uterus gives rise to pain, and why does the temporary exaggeration of the flexion increase the pain? We have carried the analysis to this point, that the pain and the flexion are associated, and the increase in the degree of the flexion is found to be answerable for increase in the amount of pain present. The clinical proofs of the accuracy of these statements which have presented themselves to me in the course of several years' observations are, to my mind, conclusive on these points. The answer to the further question, why a temporary increase of the flexion gives pain, involves the consideration of important pathological questions. Hitherto we have dealt with the purely physical elements concerned—the shape, outline, variations of shape, &c., of the uterus. We now pass into a different territory, and enter on a ground which has been a field of contention and disagreement to an extreme degree. The presence of pain necessarily implies an affection of nerves. When any part of the body is the subject of physical alteration or change, pain is almost universally present, this pain being directly traceable, as a rule, to the physical impression of this alteration or change implicating the sensitive terminal fibres of the nerves themselves. One common cause of such effects is well known to be inflammation. Inflammation of an organ shut in by a tightly constricting membrane, such as the testis, for instance, how acute is the pain, this acute character being probably due to the great pressure on the nerves necessarily occurring under these circumstances. The more closely the phenomena of pain are examined, the more evident does it seem that pressure upon, or undue tension of, the ultimate sensory portions of the nerves is the cause of the pain. With reference to the uterus the pains referable to it have had various explanations. By many they are regarded as fanciful or imaginary, or due to inflammation of the uterus, or to neuralgia. But no intelligible and consistent explanation has, so far as I am aware, been given of the *modus operandi* of the production of these pains.

The explanation which I have to give is sufficiently simple; my only fear is that its very simplicity may prove a bar to its being accepted to the extent which I think desirable in the interests of truth and progress. It is that the pain is produced by the actual compression of the nerves at the seat of the flexion. My observations have led me to conclude that the compression and condensation of the tissues of the uterus which occur at the seat of the bend is the immediate cause of this pain. This pain is increased for the moment, and it is very frequently actually brought on by any circumstance tending to condense and compress these tissues still more. Such an event happens when, from any physical cause whatever, the uterus becomes more flexed. It is my belief that the circumstance of the additional compression is responsible for the pain. But it is to me quite conceivable that this may not be the whole of the explanation. Another theory might be very well set up, and perhaps ably sustained. It might be urged that the congestion, engorgement, fulness, or whatever you please to term it, of the body of the uterus and of the cervix and os uteri, which are so frequently present in cases of flexion, are concerned in the production of the pain. As I shall hereafter show, congestion of the two extremities of the uterus, the fundus and os, are almost a part of and almost constant accompaniments of decided uterine flexions, and it is susceptible of absolute proof that the more acute is the flexion the greater may be the congestion and engorgement. Plainly, therefore, it may be said, why do you not attribute the increased pain during locomotion, in cases of flexion, to temporary increase of the congestion? For, it might be added, this increase of congestion would produce further compression of the nerves of the body of the uterus. In fact, according to this mode of reasoning, it might be made to appear probable that the pain in question is due to increased tension of the nerves of the body of the uterus set up by temporary increase of the congestion of the part in question. Still, admitting that much may be said in favour of this latter view, observation has induced the adoption on my part of the former idea as to the mechanism of the production of the pain. The concomitant congestion of the other parts of the uterus doubtless contributes to the pain, but it would seem to me probable that it does so mainly because it has a tendency to increase the compression of the tissues at the seat of the flexion. The presence of nervous filaments throughout the uterine tissues is generally admitted, though there are differences of opinion as to their actual size. At its central portion around the internal os uteri there are nervous filaments forming part of those tissues. When compression of the uterine tissues at this situation occurs, these filaments participate in that compression, hence the sensation of pain.

There are still other views as to the etiology of the pain in question requiring to be considered. It seems probable that some part of the discomfort felt by the subjects of uterine flexion during locomotion is due to the stretching and tension of the ligaments or attachments of the uterus. Thus the feelings described as "sinking" and "bearing-down," which are often complained of, seem due to this tension of the uterine attachments. The round ligament, the broad ligaments, and the utero-ovarian ligament, are principally affected, some more, some less; and these ele-

ments in explanation must not be neglected. The so-called ovarian pain, which has for a long time been considered evidence of ovarian inflammation, is generally traceable, according to my experience, to uterine flexion, and it has seemed to me to depend on traction of the connexion between the ovary and the uterus produced by the flexion. In cases of retroflexion a severe pain, situated near the groin on one or other side, is in rare cases observed, and has appeared to me to arise from tension and stretching of the round ligament. In this place also it is proper to direct attention to the fact that when the ovary is actually displaced downwards, as is sometimes the case in flexion of the uterus backwards, the pain produced by locomotion is very acute and severe. This displacement of the ovary is, however, a comparatively rare complication of uterine flexion.

3. *Undue tenderness of the uterus to the touch.*—In the next place, we have to consider tenderness, or undue sensitiveness, of the uterus to the touch, and the relation of this symptom to flexions of the uterus. In a state of health the uterus is not highly sensitive to the touch. And even the passage of the uterine sound, if carefully performed, hardly gives rise to a painful sensation until it touches the fundus uteri, when there is generally evidence of its producing a slight pain. But, under certain conditions, we find the uterus extremely sensitive and painful to the touch, so much so that the slightest touch gives rise to quite acute pain. I need hardly say that those cases where the entrance of the vagina is acutely sensitive to the touch—hyperæsthesia of the vagina as they are termed—are not included in the present discussion. Undue tenderness of the uterus may be present in all degrees; the os uteri alone may be affected, or the posterior or anterior aspects of the uterus. In severe cases the whole uterus appears sensitive to the touch. There is no symptom conveying so precise an idea as to the extent of the suffering present in a particular case as the tenderness observed on making a digital examination. It is a sign conveying very valuable information, and, when the observation is properly made, the difference between the degree of tenderness present at different situations is readily made manifest and available for diagnostic purposes.

Respecting the connexion existing between tenderness of the uterus and alteration of its shape I claim to have established a most important generalisation and conclusion, which is to the effect that tenderness of the uterus to the touch is rarely observed except in cases where flexions are present. The more acute the flexion the more acute, as a rule, is the tenderness. Tenderness is not invariably present in cases of acute flexion, and, indeed, when cases have become quite chronic, there *may* be little or no tenderness. My proposition, therefore, is not that cases of flexion of the uterus are always attended with tenderness, but that, when tenderness *is* present, it is in all but a few cases (which are explainable in other ways) associated with the presence of uterine distortion. Possibly this may be considered a bold assertion, but I confidently make myself answerable for its substantial accuracy.

As long ago as the year 1868, I published in the *Practitioner* a paper in which the "irritable uterus" of Dr. Gooch was asserted to be nothing more than chronic severe retroflexion of the uterus. Dr. Gooch's description of these cases is well known: "A young or middle-aged woman, somewhat reduced in flesh and health, almost living on her sofa for months, or even years, from a constant pain in the uterus, which renders her unable to sit up and take exercise. The uterus, on examination, unchanged in structure, but exquisitely tender; even in the recumbent position always in pain, but subject to great aggravations more or less frequently." Dr. Ferguson, who edited Gooch's writings, a few years since, speaks of a congested condition of the uterus "altering its shape into that of a retort," as having existed in some instances, though he does not appear either to have connected the retort shape with the congestion or to have considered it as in any way concerned in the production of the pain. In my paper I proceeded to show that this retort shape of the uterus was a necessary part and parcel of the affection, and expressed my opinion that these so-called cases of "irritable uterus" were actually cases of chronic retroflexion. Since this paper was published I am not aware that any refutation of this view has been published; and the only furthur observation I have to make on the subject of Gooch's irritable uterus is that I have since seen many cases of this kind in which the condition of the uterus amply sustained the view in question. But there is a slight qualification to make—viz., that the same symptoms may be observed in connexion with anteflexion of the uterus as with retroflexion. The typical and most severe cases are cases of retroflexion, but in severe cases of anteflexion the symptoms may be very much the same. Further inquiries and observations have made me acquainted with the close connexion existing between distortion of shape and tenderness of the uterus, of which Gooch's cases of irritable uterus constitute well-marked and extreme instances.

A very acute flexion is usually attended with great congestion. The conjunction of the two gives rise to the greatest degree of tenderness. And, inasmuch as the uterus may become more bent when the fundus is turned backwards than when turned forwards, the retroflexion cases are, as a rule, the most severe, and accompanied with the greatest tenderness. In cases where there is much congestion the tenderness is more evident when the body of the uterus, than when the cervix, is touched. In backward flexions the fundus is often found so tender that the merest touch gives acute agony, and the act of defecation is attended with great suffering, owing partly to the contents of the rectum passing over the painful spot. In acute anteflexions the fundus is generally less easily felt, owing to the intervening stratum of urine, but the presence of acute sensitiveness of the fundus can often be subetantiated in these cases.

It is worthy of mention that considerable sensitiveness to touch is sometimes found on examination in cases where other symptoms—pain on locomotion, &c.—have been slight in degree, and under these circumstances the examination reveals the grave nature of the case.

The sensitiveness of the uterus in cases of flexion may be associated with slighter degrees of congestion. It may be present also in cases where the congestive stage has passed away, leaving the uterine tissues hard and hypertrophied. In these latter cases the tenderness is less universally spread over the uterus.

Extreme sensitiveness is met with in many quite chronic cases of flexion at the internal os uteri, or its neighbourhood. The existence of this sensitiveness is, of course, only ascertained by the use of the sound. This, however, seems the place to mention it. Under these circumstances there exists a severe chronic neuralgia at the internal os. The subjects of this affection have well-marked pain on locomotion, always situated in some one spot. Thus in two very chronic anteflexion cases where this severe internal sensitiveness existed, walking always occasioned so severe a pain in the inguinal region that it had to be given up, and the sofa had become always necessary.

Functional disorders of the uterus.

1. *Dysmenorrhœa.*—One of the important functions of the uterus is *menstruation.* How far, and in what way, is alteration of the shape of the uterus likely to disturb this function? Regard simply the physical conditions essential to the due performance of the function. A certain quantity of fluid containing minute shreds of broken-down membrane has to be discharged at each catamenial period from the cavity of the body of the uterus. It has to pass through an aperture—the internal os uteri—which, in the natural state, is about one-eighth of an inch in diameter. This aperture is the central and smallest part of the uterine canal. The canal at this situation is surrounded by the firm resisting fibro-muscular tissues of the uterus, the uterine walls being at that situation, as already remarked, rather thinner than elsewhere. In the ordinary course of things, the menstrual products pass through this narrow aperture slowly, but continuously, the size of the passage being sufficient to drain the uterine cavity, and discharge the fluid as fast as it is poured out from the lining of the body of the uterus.

The patency of a tube is greatest when it is completely circular in shape. Flatten the tube and you at once diminish its calibre. Carry the flattening process far enough and you extinguish the tube altogether. These are truisms, and I almost apologise to you for stating them. The question is—Have they, or have they not, an application to the uterine tube, and what is the effect of change of shape of the uterus in impairing the patency of this tube. It so happens that the internal os uteri—the narrowest part of the tube—is coincident with the middle of the uterus, the

situation at which in cases of flexion-distortion, the bend is most usually found to occur. The physical relations of the parts are such that a certain flattening of the canal is inevitable when the uterus is bent at this situation. The flattening occurs from before backwards. It varies in degree, according to the degree of the flexion and other circumstances, and it is demonstrable, from anatomical considerations alone, that flattening and consequent impairment of the patency of the canal must inevitably occur when the uterus is decidedly flexed, and thus distorted. This is so obviously true that it seems almost unnecessary to insist upon it.

But we may go a step further. It is probable that during menstruation the internal os uteri is capable of becoming to a certain extent dilated so as to more readily allow of the escape of menstrual products. It is believed by some that the internal os uteri has a regular sphincteric action, expanding and contracting according to circumstances. It seems probable that in a state of perfect health no such expansion is required to allow of escape of menstrual products; but it is quite certain that such expansion is required if the menstrual débris be unnaturally solid or bulky; and it is quite possible that the internal os does undergo expansion to a certain extent, even in less abnormal cases. But I would direct attention to the fact that, if the uterus be decidedly bent, such expansion of the internal os must be very materially interfered with. The tissues around the internal os are necessarily compressed and rendered harder and more resisting by the mere fact of the existence of the bend. The flexion occasions not merely a flattening of the canal, but a condensation of the uterine tissues in the neighbourhood, such as would directly and forcibly resist any expansion and dilatation of the tube. Other important changes are observed at this situation in consequence of the presence of flexion, but they will be considered later on. The patency of the uterine tube, under ordinary circumstances, is, in short, dependent on the uterus preserving its proper form, and thus allowing the canal to remain circular in shape. [Illustrated by a large sponge model of section of the uterus.]

The connexion between obstructed and painful menstruation and constriction or narrowing of the internal os uteri is one which has been forcing itself on professional attention for some time. But the subject has been imperfectly understood. Stricture of the internal os uteri has been very frequently assumed to be present when the canal was simply very much bent at that point. The condensation and hardening not unfrequently present around the narrow portion is undoubtedly often great in long-standing cases, and a veritable stricture not seldom exists. But at first it is not so, the canal admitting of easy passage of the sound if the point be only directed properly and in conformity to the bend of the uterus which is present. All cases of dysmenorrhœa are not due to flexion, but the vast majority of them come under this category. There are a few in which the canal is congenitally narrow, or in which obstruction exists at other situations, or in which the obstruction is due to some other condition—a small fibroid tumour growing so as to compress the canal, for instance; but these cases are rare.

Now the truth of the foregoing statements regarding dysmenorrhœa rests on evidence which seems to be quite unassailable. Clinical facts are most thoroughly and entirely in accordance with this view. Let individual cases be tested, let the uterus be carefully examined, and it will be found that marked dysmenorrhœa will, unless in a very few and exceptional cases, be found associated with undoubted flexion of the uterus. The proof of the connexion between the two things—the flexion and the obstruction—is of the most convincing kind. Relieve or remove the flexion, and the pain and difficulty disappear. It is true that this may not be enough to completely cure the patient when the canal has been distorted some time, and further changes have occurred; but this effect, in the majority of cases, is very striking. Why do we find that many cases of dysmenorrhœa are relieved by simple observance of the recumbent position during the period? Simply because the existing flexion is thereby somewhat diminished, the canal is a little straightened, and the escape of the uterine contents is thus rendered more easy. The pain which accompanies difficult menstruation is due to the existence of an impediment to the escape of the fluid. This doctrine is not in accordance with the older teaching on the subject. It is a mechanical view of the matter, and it is unquestionably the true one. Having given this explanation of the matter in the first edition of my work on Diseases of Women, published in 1863, it is satisfactory to find that this view has been steadily gaining adoption of late years. The pain appears to be partly due to the distension of the uterus cavity, causing compression and tension, and congestion of the body of the uterus, but chiefly to actual muscular contraction of the uterus; in fact, to a "pain" similar to those witnessed in parturition, though on a smaller scale. The body of the uterus contracts, and in the end generally succeeds in expelling its contents. In so doing, the internal os uteri must become dilated, in order to allow of the passage of the fluid or débris of membranes or clots. In cases of flexion, when the malady is not of very long duration, the contraction of the uterus seems to have a straightening effect on the uterus, and when this occurs the canal is thereby opened to a certain extent, and the uterine contents escape. But in severe or long-standing cases the circumstances are such that the uterus has no power of straightening itself, and then we find that the process of emptying the uterus is a very slow one; the pains recur from time to time with little relief, and the catamenial period is both protracted and painful.

In cases of the latter description, a frequent phenomenon is the abrupt cessation of the flow for a certain time—a few hours or longer,—after which the pain and discharge again recur. A further phenomenon, traceable to the same cause, is a certain dilatoriness in the appearance of the discharge. The fluid observed at first is very slight in amount, or there may be none at all for the first day or two, during which time, however, pains are more or less frequent; also a protraction of the period, together with alteration in the character of the discharge from red to brown, and later on to a still lighter discharge, evidencing that the retained contents of the uterus are now mixed with a fluid of a non-sanguinolent character.

2. *Sanious or purulent leucorrhœa from menstrual retention.*—Finally the period quite ends. But in a certain number of cases other effects of the retention present themselves during the inter-catamenial intervals. Here we come upon a class of facts of the greatest interest and importance from a clinical point of view—facts which deserve minute and particular attention.

There are a certain number of cases, occurring not very rarely, in which during the inter-catamenial intervals there are observed from time to time, perhaps once in two or three days, and generally particularly during the week or ten days immediately following catamenial cessation, discharges of a puriform character coming on suddenly, lasting for a brief period only, and then ceasing. A puriform leucorrhœa occurring in gushes is an accurate description of what is observed. This occurrence is due to the existence of chronic flexion of the uterus. It arises from imperfect emptying of the uterus. At the close of the period something is still left. This unevacuated fluid undergoes changes resulting in its conversion into the puriform fluid. The uterus becomes distended with this accumulation. It is increased by the addition of further fluid of a watery character poured out by the lining of the uterus, and when distension reaches a certain point, it is expelled. That is to say, it is partly expelled, but after a time further distension occurs, followed by a fresh expulsion. I have observed many cases of this kind—in fact, the occurrence of puriform leucorrhœa coming away in gushes is by itself almost diagnostic of the existence of a chronic flexion of the uterus, and during an experience of some years, this sign has proved of great value. Patients suffering from this affection sometimes describe what they term little abscesses bursting from time to time. In certain rare cases the retained uterine contents are actually offensive to the smell, the fluid having become putrescent before it is discharged.

The condition of the lining of the uterus in these cases of chronic flexion leading to retention and decomposition of the catamenial fluid is peculiar. The uterus is naturally irritated, the lining membrane secretes more fluid than usual. There is, in short, what is termed endometritis. But the view expressed above as to the process actually going on in cases of endometritis is very different from that usually entertained. It is, nevertheless, sustained by facts, and it will be found that if provision be made for the free

escape of this retained irritating fluid the endometritis will cease.

A very important further effect follows in a considerable proportion of these chronic cases of flexion with retention of uterine secretion; I mean dilatation of the uterine cavity and hypertrophy of the uterine walls. My friend, Dr. John Williams, has directed attention to the circumstance that we are too apt to forget that the uterus is a hollow muscle liable to become hypertrophied like other hollow muscles when the organ is called upon to exercise an unwonted degree of action. Thus the existence of necessity for increased expulsive action will necessarily have a tendency to increase the thickness of the uterine wall. It is a fact that there is evidence of excessive muscular action in cases of dysmenorrhœa, and it is also a fact that in cases where the inter-catamenial discharges above mentioned occur, the body of the uterus is unnaturally large. The physical effect of the distension of the uterus in enlarging its cavity must also not be forgotten; the uterine cavity becomes thus increased in dimension.

3. *Menorrhagia.*—It happens not seldom in these cases of uterine distension and retention that the quantity of blood poured out at each catamenial period is very excessive. In fact menorrhagia is observed. This menorrhagia has, in most instances, a mechanical origin. Menorrhagia does not, of course, arise solely in cases of uterine flexion—there are other causes unquestionably; but, nevertheless, chronic flexions and severe menorrhagia are not rarely associated as cause and effect. Cases of this kind usually go on from bad to worse; the period becomes gradually longer and longer, the quantity of blood lost greater and greater; the uterus, perhaps, succeeds in expelling its contents, but, becoming more and more enlarged, the surface from which blood is poured out is proportionately increased in area. The drain affects in time the general health, and this, in its turn, affects the nutrition of the uterus. Consequently it may become hypertrophied, loose, and wanting in tonicity. The blood, more and more watery in character, oozes out more readily as the weakness increases, and other evidences of prostration necessarily show themselves.

Thus a decided flexion of the uterus may cause—First, slight dysmenorrhœa; secondly, dysmenorrhœa, with retention and intermittent discharge; next, purulent intermittent discharges; and, concurrently, or still later on, severe menorrhagia may be added. The order thus indicated is by no means always closely observed.

The presence of clots in cases of menorrhagia is sometimes noticed. Sometimes such clots are formed in the vagina, but more generally they originate in the cavity of the uterus. Retention of blood is, of course, the first event in such cases; the blood so retained becomes clotted, and has finally to be expelled. The passage of the clot through this narrow internal os uteri necessarily occasions much pain. The dysmenorrhœa is most severe in those cases where clots have to be got rid of, and the pain is sometimes of a most agonising character. In some cases the clot never is expelled as such, but becomes broken up. Probably some of the cases where a sanious leucorrhœa is observed for a few days after the regular period is over are cases of this kind; the clots retained break down, and the débris are gradually, but slowly, expelled.

It must be further remarked that the difficulty experienced by the uterus in relieving itself of the retained products in cases such as above described is materially increased by the dependent position of the pouch containing the fluid. When the patient is upright, and the body of the uterus strongly bent forwards or backwards, the action of gravity is opposed to the evacuation of the uterine contents. Thus, in the retort-shaped uterus, the enlarged pouch hangs downwards, forwards, or backwards, as the case may be, and the fluid must move really upwards, in order to pass through the internal os uteri, when the obstruction which exists further adds to the difficulty. The double difficulty of moving upwards in a direction opposed to the action of gravity and moving round a corner presents itself under such circumstances. Clinical observation of these cases offers convincing proofs of the operation of these natural laws. Thus it may be found that in a case of anteflexion, with purulent retention, the discharge is free and continuous so long as the patient remains in bed, but on rising in the morning it suddenly ceases, appearing only in gushes at intervals during the day, and on lying down again at night a further comparatively free and continuous escape of fluid occurs. What is this but the result of the action of the laws of gravity? In the upright position the flexion is intensified, the aperture of the internal os more closed, the pouch of retained fluid in a hanging dependent position. Place the patient in the horizontal position and gravity no longer opposes, to so considerable an extent at least, the escape of the retained contents. The further analysis of these cases into such as are benefited by the prone position for retroflexion, and by the dorsal position for anteflexion, is made for us by the facts occurring in actual cases. For the evacuation is rendered more easy in retroflexion cases by the prone position, and the reverse in anteflexion, for obvious reasons.

The foregoing considerations regarding the effect of alteration of shape, and consequent narrowing of the internal os uteri, in disturbing in various ways the function of menstruation commend themselves on what may be termed *à priori* grounds. But I have to remark concerning them that they are really generalisations from many carefully observed cases. The facts came first, and I attempt now simply to render an explanation of them. The above explanation is fully in accordance with what is readily observed and observable. But I may add that in the course of treating these maladies opportunities are ever presenting themselves for observing the behaviour of the uterus under varying circumstances. The effect of treatment is often useful in conveying information as to the nature of the disease. Thus, when dysmenorrhœa disappears on straightening the uterus, it is natural to conclude that this pre-existing flexion had much to do with the difficulty experienced. When we find that a troublesome leucorrhœa undergoes immediate mitigation on so altering the shape of the uterus that its contents can escape, it is not extraordinary that there should be a disposition to connect the leucorrhœa and the uterine distortion as effect and cause. The effect of treatment is, in fact, a sufficient answer, even if there were no other, to those who would ignore the existence of an intimate connexion between uterine distortion and these various effects.

Undoubtedly all cases of dysmenorrhœa, all cases of leucorrhœa, all cases of menorrhagia, are not included in the description above given. It is not intended that they should be. Dysmenorrhœa, leucorrhœa, and menorrhagia are occasionally traceable, certainly dependent, indeed, on other alterations and conditions of the uterus or other organs, and flexions of this organ are not chargeable with these symptoms in all cases. But in a very large majority of cases uterine distortion can be truthfully arraigned as the prime mover and originator of them.

ON THE USE OF PHYSOSTIGMA IN SOME NERVOUS AFFECTIONS.

BY SYDNEY RINGER, M.D.,
AND
WILLIAM MURRELL, M.R.C.P.

As is well known, physostigma powerfully depresses the motor and reflex portions of the cord, but leaves the sensory little or not at all affected. This action on the cord led to the use of this drug in tetanus, and with some success. Three or four years ago Dr. Crichton Browne narrated some cases of general paralysis of the insane greatly benefited by this remedy. At about the same time we employed it with benefit in a case of general paralysis with great wasting of the muscles in a boy nine years of age. Since then we have continued our observations concerning the use of physostigma in nervous affections; and though our cases are few and the results not very convincing, we publish them as a contribution to the subject and as a help to those who are working in the same field. We give notes of four cases of paraplegia, two of locomotor ataxy, and one of writer's cramp. Of the paraplegic cases, one was unaffected; two improved very considerably, but afterwards relapsed; the fourth was steadily improving when last seen. Both cases

of locomotor ataxy greatly and permanently improved; and the case of writer's cramp was cured.

D. N——, aged forty, at first came under observation at the Chelsea Infirmary, where he had been an inmate for nine months. He is a native of Plymouth, and by occupation a labourer, chiefly on the railway. In 1866 he fell on his head a distance of twenty feet. He was taken to the hospital, and was, he says, insensible for some hours. He soon recovered, returned to his work, and never suffered from the fall subsequently. He in no way connects his present condition with the accident. With this exception he has enjoyed good health, and has seldom been out of work. He had the clap when a young man, but nothing more, and there is no history of syphilis. He knows nothing of any of his relatives. About three years ago the pains in the legs of which he now complains were first noticed. About two years ago he had a "fit of gravel" and some difficulty in passing his water; this gave way under treatment, and he has since suffered from incontinence of urine. The loss of power in the lower extremities commenced gradually about six months before admission, and he has been unable to work since. For eight or nine months he had suffered from obstinate constipation.

The following are the notes of his condition taken on the 19th of November, 1874:—Patient walks across the ward slowly and with evident difficulty, leaning heavily on his two sticks. The right leg drags, and is moved with much less freedom than the left. By the aid of his sticks he is able to walk half the length of the ward; without them, or with one stick only, he cannot move a step. He is quite unable to stand alone; his legs, he says, "seem too weak for him," and "give way at the knees." When sitting down, he can raise his right leg only a few inches from the ground, cannot cross it over the other leg, and is quite unable to stamp with it. The left leg can be moved freely in any direction. When in bed he cannot tell where his legs are, and even if they be crossed he has no idea which is on the top. He suffers greatly from stabbing pains extending from the hips to the toes. The pain is always worse at night, and keeps him awake, so that he hears every hour strike. The legs are often involuntarily drawn up during the paroxysms of pain. In the intervals between the pains he is much troubled by formication in the lower extremities, but is occasionally free from it for two or three days together. The legs are cold both objectively and subjectively; and there is considerable loss of tactile sensibility in the right leg, but none in the left. There is no impairment of nutrition. Patient has a distinct feeling as of a cord tied tightly round the body in the lumbar region, "just across the kidneys." He is unable to retain his urine for more than half an hour at a time, often for not more than ten minutes. The bowels are seldom open oftener than once a week. There is no pain or tenderness in the back. The mental condition is not impaired, and the general health is good. He has been steadily getting worse for more than a year, and every day feels weaker and weaker.

The patient was ordered one-tenth of a grain of extract of physostigma, in the form of a pill, to be taken every three hours.

In a case of such length, in which the progress is of necessity slow, it would be tedious to transcribe the notes in full; a *résumé* of the chief points of interest has consequently been substituted.

During the first ten days of the treatment there was little or no improvement. Patient then noticed a change, and at the end of the month was slightly though distinctly better. The walking had improved, and he could get about with much greater confidence. The pains in the lower extremities were less severe, and on one occasion patient had slept continuously for two hours, for the first time for many months. The coldness and formication in the legs were less, the increased warmth of the extremities being one of the earliest indications of improvement. The urine was retained longer, and patient experienced much less difficulty in keeping himself dry.

By the end of the year a still further improvement was noticeable. On Christmas day he walked, with the aid of his sticks, the length of the ward and back. He was able to stand alone for forty seconds without fear or apparent effort.

During the month of January, 1875, the patient improved still further; and on February 4th he walked six times the length of the ward, with a rest of a few minutes between each journey. He stood alone for nearly a minute and a half. He stated that he slept usually for three or four hours at a time, and that he could probably sleep longer, but was in the habit of waking up several times during the night that he might not miss taking the pills. The medicine had no effect on the constipation. On being asked to what extent he had improved, the patient pointed out (1) that when treatment was commenced he could not walk with his sticks more than half the length of the ward, and was unable to stand alone, whereas he could now walk six times the length of the ward, and could stand alone for about a minute; (2) that the pains and "creeping" in the legs were less frequent and less severe, and that he consequently slept very much better; (3) that he could hold his water twice as long as before; and (4) that, when in bed with the legs crossed, he could now tell which was on the top of the other.

In the middle of February the patient was accidentally kept without medicine for nearly a week, and lost ground considerably; the walking power was reduced, and the pains in the limbs increased in severity; the formication was worse, the water was retained with greater difficulty, and the patient became again extremely restless at night. The pills were resumed, and the patient in a week had regained much of the lost ground. On Feb. 18th, at the expiration of the third month of treatment, the pills were ordered to be taken every two hours.

During the cold months of March and April the patient's condition fluctuated considerably, the pains in the limbs being always increased by the then prevalent north and north-east winds. The progress on the whole, though slow, was very satisfactory, the patient being convinced, as were his attendants, of his improvement. During the month of May he was able to take out-door exercise, walking about the yard by the aid of his sticks without difficulty, the sticks being used more for the purpose of balancing than as a means of support. The patient was at this time able to walk a few steps alone. The sensation of the cord still continued in its old position.

During the next two months the patient continued steadily to improve. He was able to walk about the ward freely with the aid of his sticks, and once or twice succeeded in walking several yards without them. His legs felt stronger, and the dragging of the right foot was hardly perceptible. The increase of power, in the right leg especially, was very marked; the patient could cross it, though with a little difficulty, over the left thigh, and could then replace it on the ground. He could also lift up the right foot some couple of feet or more, and stamp with it firmly on the floor, an act which he had been quite unable to perform for eighteen months previously. The pains in the limbs were very much better, and were often entirely absent for days together. He slept well at night, so that instead of taking his pills every two hours, he usually took them only twice. The "band round the body" had not shifted its position, but was apparently less tight, and was often absent for days together. The formication in the lower extremities was also considerably less, and was almost confined to the feet.

At the end of August, at the time when the patient seemed to be on the high road to recovery, he had a relapse. In a few days he had lost much of his recently regained power. The pains in the limbs increased in severity, his sleep was disturbed at night, and the dribbling of the urine soon became almost as bad as ever. He is now able to walk only a few steps with difficulty, and whilst so doing seems to be in momentary danger of falling; in fine, he is almost as bad in every respect as he was at the commencement of the treatment.

The following case of simple motor paralysis improved rapidly and considerably whilst taking physostigma.

W. U——, aged thirty-five, clerk, was admitted into University College Hospital, Oct. 8th, 1875. He is a highly intelligent and well-educated man, speaking five languages. He has lived in London, Paris, and Marseilles. His parents are alive and well. He has had small-pox, scarlet fever, cholera, and, seven years ago, a severe attack of facial neuralgia; he never had rheumatism nor syphilis. He has never felt well since his sufferings in Paris during the siege by the Prussians, and during the Commune. During last winter he was much over-worked for six weeks, and during that time had almost every morning copious seminal emissions. His present illness began five weeks ago. His legs felt very weak and fatigued. This increased, and one day, on getting

out of a cab, he fell. His weakness rapidly grew worse till the day of his admission. He had kept his bed since Sept. 16th. When admitted there was great loss of power in both legs, so that he could not stand. His left leg was the worst; indeed, he could not move this leg, though he could contract feebly some of the muscles; he could slightly flex this foot. He had more power over the right, for he could slowly and with difficulty bend the knee. Some of the muscles were much more affected than the rest, and the disease appeared to have affected groups of muscles—for the tibialis anticus, extensor longus digitorum, and processus pollicis were much more affected than the other muscles of the right leg, and much more than the corresponding muscles of the left leg. He could scarcely move his toes, but had rather more power over those of the left than the right foot. He had difficulty in raising himself in bed, and he had lost some control over the bladder, and to a less extent over the rectum. About every half hour he had a sharp, shooting pain down the outside of the right leg. There was hyperæsthesia of the leg, and especially of the feet. Sensation was perfect, and he could appreciate in his legs the difference between heat and cold. There was no numbness, or tingling, or formication, or cramps, or starting, or feeling as of a tight band round the body. There was no tenderness over any part of the spine, when tested by striking it with the fist, or by a hot sponge, or a piece of ice. The muscles of his legs were rather wasted and very flabby. There was no want of co-ordinating power. The muscles had lost their electric irritability. He was ordered one-fifteenth of a grain of extract of physostigma every three hours, on the 9th of October. He at once began to improve, and his improvement was very rapid. On the 15th of October he had much more power over his legs, which felt much lighter, and had lost their heavy lead-like feeling. The shooting pain had ceased. His improvement continued, so that he regained his lost power over his rectum and bladder, and his legs grew so much stronger that he could raise them from the bed, flex the ankles, and move the toes freely. On Nov. 8th, he could stand alone, and, with very little help, walk some yards. When last seen he was steadily though slowly improving. His temperature and urine were normal.

We have employed it also in two cases in private practice, to which we shall very briefly refer.

S. D——, aged thirty-five; had been ill three months. His symptoms were progressive loss of power over his lower extremities, especially the right, but without starting cramps or formication, or the feeling of a tight band across the body, or loss of power over the bladder or rectum. There was a good deal of numbness, but without much loss of sensation. The limbs were much wasted, but the muscles responded freely to galvanism, those of the right leg less than the left. He took one-fifteenth of a grain of extract of physostigma every two hours for nine months, and his legs were galvanised every other day. When he began this treatment he could scarcely walk across the room. He soon improved, and in three months' time could walk several miles without fatigue. Then he had a relapse, but again improved. After four months he again relapsed, and did not improve in spite of the continuance of the medicine. He then continued much the same, being nearly as bad as before he took the physostigma.

This case is unsatisfactory in several particulars. It may be said that the improvement was not due to the physostigma, and that this is proved by the relapse occurring whilst he was taking the remedy, and by its not improving him after the relapse. Moreover, it may be said that the improvement was due to the galvanism. Though we have not much to urge in support of our opinion, we felt convinced that the improvement was due to the physostigma. We may say that up to the time of taking it he was rapidly growing worse, and that he immediately improved after the combined treatment.

We also tried this treatment in the case of an old man about sixty, suffering from either chronic softening or chronic inflammation of the cord of several months' standing, but without any good results.

In spite of these rather unfavourable results, we cannot help feeling that physostigma will be found useful in some forms of paraplegia, especially if given in an early stage before the disease has had time to disorganise the cord.

(To be concluded.)

A BRIEF RECORD OF TWENTY-ONE CASES OF LATERAL LITHOTOMY IN THE MALE ADULT, PERFORMED BY SIR HENRY THOMPSON.

BY G. BUCKSTON BROWNE.

BETWEEN January, 1875, and August, 1877, it has fallen to my lot to hold the staff or to assist in the after-treatment of twenty-one consecutive cases of lateral lithotomy in the male adult operated upon by Sir H. Thompson in his private practice. These cases were almost all in advanced life; the mean age of the whole is sixty years, constituting therefore a remarkable group. In addition to this fact, each case was necessarily more grave and difficult than the average, being deemed unfit for lithotrity. Either the size of the stone or some defect in the constitution rendered the cutting operation imperative. Of these twenty-one, three died, eighteen recovered, and all but one of them are living now. I may add that Mr. Clover gave ether in every case.

1. A French gentleman, aged seventy. Symptoms very urgent. Urine loaded with deposit. Operation Jan. 26th, 1875. Large soft phosphatic stone, broke in the forceps. Difficulty in removing pieces. Tube-en-chemise put in, and removed in two days. Wound healed Feb. 20th. On Feb. 26th an abscess formed under cicatrix; when opened, discharged a small fragment. Recovery perfect.

2. A gentleman of sedentary habits, aged sixty-nine. Symptoms urgent. Operation Feb. 3rd, 1879. In the forceps the phosphatic shell broke off a large uric-acid nucleus. One vessel tied. Tube-en-chemise introduced, and removed in three days. For some days the patient was weak, and the urine contained much blood and pus, but he rallied and went home on the 13th March, and slowly made a good recovery. He died a year afterwards.

3. A retired naval officer, spare habit, health good, aged eighty. Symptoms three years. Operation 11th March, 1875. A medium-sized flat uric-acid stone. Tube-en-chemise applied; removed in two days. Went home quite well on the 3rd of April.

4. A young man, tall, and of spare habit, aged twenty-two. Symptoms since childhood. Operation 18th May, 1875. Large uric-acid stone. Bleeding free, two vessels tied, and tube-en-chemise put in; taken out in three days. Urine by penis on the 5th June, and up to 19th June all was well, when a little fæcal matter came by the penis, and a little urine by the rectum. Lived comfortably a year at home. On May, 10th, 1876, examination showed a fistula just inside anus, leading into urethra. Galvanic cautery applied. Taught to use catheter. Heard of on the 30th of June, 1877, in good health, but fistula not quite closed yet.

5. A gentleman, stature all, stout, in a lunatic asylum, aged sixty-six. Operation Jan. 22nd, 1875. A large calculus, which broke in forceps into three entire uric-acid stones, united by mixed phosphates. Very severe hæmorrhage; gave no time to search for fragments. A deep bleeding point ligatured with tenaculum. Bleeding ceased when the tube-en-chemise was tightly packed in. Wound healed rapidly, but as symptoms continued he took ether July 22nd, and some small phosphatic fragments were seized, crushed, and removed with lithotrite. Recovery complete; gradually became sane, and is so still.

6. A gentleman, thin and spare, aged twenty-six. Symptoms since a child. A large uric acid-stone impacted in the neck of the bladder. Operation Nov. 23rd, 1875. No bleeding; no tube employed. By Dec. 5th all urine by penis. Recovery perfect.

7. A gentleman, aged sixty-eight; short stature and very stout. Operation Feb. 2nd, 1876. An enormous flat uric-acid stone. No bleeding; no tube. In three days all urine by the penis, and none ever afterwards by wound. Recovery complete.

8. A gentleman, aged forty. A nervous irritable temperament. Has kept his bed four weeks on account of the pain caused by locomotion. Operation March 18th, 1876. A singularly rough and irregular oxalate-of-lime stone removed. Two arteries tied, and tube-en-chemise put in; removed in three days. Recovery rapid and complete.

9. A gentleman, pale, stout, feeble constitution, aged sixty-nine. Symptoms very severe. Operation May 1st, 1876. Very deep perineum. Gorget used. An enormous and very rough uric-acid stone removed, also a small one. Hæmorrhage free. Wound plugged firmly with tube-en-chemise; removed in three days. Complete recovery, and now enjoys excellent health.

10. A large man, once a policeman, weighs 20 stone, aged fifty-three. Symptoms urgent. Operation 26th May, 1876. A medium-sized uric-acid stone. Bled very much; wound plugged with tube-en-chemise. Hæmorrhage came on again in six hours. A tight pad and a T bandage stopped it. By June 11th all urine by penis. Recovery complete.

11. A country gentleman of spare habit, aged fifty-five. Symptoms well marked. Operation May 29th, 1876. A flat, round, uric-acid stone removed. No bleeding; no tube. Recovery rapid.

12. A country gentleman, aged sixty-five. For two years unable to hunt. Operation June 5th, 1876. Much difficulty in extracting the stone, which was large, curiously shaped, and mammillated, of oxalate of lime coated with urates. No bleeding. No urine could be passed by either penis or wound, and up to August it was drawn off by catheter. On June 12th liquid motion came by the wound. Since then much trouble from a recto-urethral fistula, which still exists in spite of treatment.

13. A gentleman, aged seventy-nine; exceedingly irritable temperament. After two months of delay from indisposition on all sides to encounter the risk of operation for a most unpromising case, the symptoms became so urgent that the patient begged to be relieved at all hazards. Operation July 13th, 1876. Large uric-acid stone, with phosphatic shell. Bleeding slight; wound tightly plugged with tube-en-chemise. The following night and day very restless, irritable, and wandering; had pain in the bladder. On the 15th abdomen rather swollen and tender. He gradually sank, and died on July 18th.

14. A gentleman aged sixty-three; stout, of placid disposition. Has long passed all his urine by catheter. Symptoms well marked. Operation July 24th, 1876. A medium-sized phosphatic stone. No bleeding. Tied a catheter into bladder through penis; took it out at night. Soon quite recovered.

15. A gentleman, aged seventy, robust and active. Symptoms very urgent. Operation Nov. 25th, 1876. A very large uric-acid stone. Tube-en-chemise put in and removed in three days. By Dec. 3rd all water by penis. Recovery perfect.

16. A country gentleman, aged seventy-two, of excitable temperament bordering on insanity. Symptoms severe. Operation Dec. 19th, 1876. Perineum very deep. Gorget used. Stone a medium-sized uric-acid one. Tied artery with tenaculum and plugged wound with petticoated tube. For three days all promised well, but symptoms of pyæmia appeared, and he died.

17. A Welsh gentleman, aged fifty-five, of temperament similar to the preceding. Used opium freely. Symptoms very urgent. Operation Feb. 17th, 1877. Medium-sized phosphatic stone easily removed. No bleeding. He never seemed to recover perfect consciousness, but tossed about and was unamenable to reason. Sank from sheer nervous exhaustion, and died the following day.

18. A very stout gentleman, aged sixty-eight. Symptoms severe. Operation May 10th, 1877. A large uric-acid stone. Free deep-seated bleeding. Had to tie a point with tenaculum, and secured another by tying an artery forceps on to it. All went well, the forceps and tenaculum coming away in twelve days. Recovery rapid and complete.

19. A stout gentleman, aged forty-eight. Symptoms marked but not urgent. Operation June 13th, 1877. A large uric-acid stone. Much bleeding. Wound firmly plugged with tube-en-chemise; removed in three days. Much bilious vomiting. On the 27th all was well. The next day (fifteenth day) sharp hæmorrhage occurred, which was controlled by a dry lint plug and tight T-bandage, and removed in three days. The patient progressed well till July 4th (twenty-first day), when severe bleeding came on and threatened to destroy the patient. A petticoated tube was carefully introduced through the wound and plugged with strips of lint soaked freely in solution of iron. In three days the tube was untied, and in a week it gradually slipped out. By July 15th nearly all the urine came by the penis, often without his knowing it. He improved, and by October his recovery was perfect, with complete control over the bladder.

20. A gentleman, tall and pale, aged fifty-nine. Symptoms very severe. He was much reduced by suffering. Operation August 13th, 1877. A very large and irregular uric-acid stone. No ligature nor tube needed. However, in about eight hours, began to bleed freely. The dilatable lithotomy air tampon, described by me in THE LANCET for Sept. 15th, 1877, was introduced and inflated. The bleeding ceased at once. Each day pressure was diminished, and on the 4th the plug was removed. Recovery complete.

21. A gentleman, aged seventy-four, sanguine, spare, active temperament. Symptoms well marked. Operation August 20th, 1877. A large round uric-acid stone removed. Free hæmorrhage from an obscure source. The dilatable tampon introduced and inflated. Bleeding ceased almost at once. Tampon removed on the third day. Convalescence prolonged but satisfactory, and he is now well.

Remarks.—It deserves notice that the three deaths occurred in men whose irritable temperaments, in two almost amounting to insanity, rendered them very unpromising subjects for surgical interference. It is no less so that only one patient out of the twenty-one died of pyæmia. The latter fact is one not to be overlooked in reference to atmospheric sources of pyæmia. Few wounds can be more exposed to dangers from such sources than that which is made by lithotomy; the discharges are always foul; decomposed urine, septic gases, and fæcal matters are always in close proximity, and the wound itself involves injury to cellular tissues. Yet in twenty cases out of twenty-one no infection took place.

In elderly men, like these, especial danger, or, at least, anxiety, arises from bleeding. The tube was found useful in fourteen cases, and, perhaps I may be allowed to add, of late that modification of it which I have described as the inflatable air tampon. So also in such cases the rectum is sometimes in danger, especially when the stone is large and the bowel considerably dilated, as is often the case in elderly people.

ON THE

DIAGNOSIS AND TREATMENT OF ACUTE DISEASES INDUCED BY ALCOHOL.

BY JOHN CURNOW, M.D.,

PROFESSOR OF ANATOMY, KING'S COLLEGE; ASSISTANT-PHYSICIAN, KING'S COLLEGE HOSPITAL.

THE acute forms of alcoholism of which I purpose speaking are:—(1) Acute catarrh of the alimentary mucous membrane; (2) rapid coma from alcoholic poisoning; (3) some varieties of delirium tremens; and (4) a special type of insanity termed oinomania.

The symptoms of acute intoxication and of the gastric catarrh which follows this condition are well known; and the fact that the latter cannot be diagnosed from any other form of gastric catarrh, except the patient is willing to take us into his confidence, or we guess thereat from a knowledge of his habits and from the suddenness and severity of the attack, renders it quite unnecessary for me to dwell any longer thereon, and I pass on to the phenomena of acute alcoholic coma.

In slight cases of alcoholic coma, prolonged drowsiness is the chief symptom; but in the severer forms the patient is quite insensible, the power of motion is in complete abeyance; the breathing is stertorous; the face usually pale, the features remaining symmetrical; the pupils dilated, though they may be contracted or even unequal; the pulse slow, full, and laboured; the skin cold and clammy; and the temperature low—in one case it fell to 92° Fahr. There may be albuminuria, and occasionally the urine and fæces are passed involuntarily. From this brief account it will be seen that the general features of the coma present nothing distinctive, and for our diagnosis to be certain, we must be able to exclude the other causes of deep coma. Blows on

the head should be carefully looked for, as in many cases the symptoms of concussion of the brain are very like those of that stage of drunkenness which is just short of complete coma, and from severe blows absolute coma may result. The smell of the breath is quite unimportant, and often misleading, for a man who has been drinking may fall and injure his skull, and if the breath be alone considered, we may dismiss a serious case of concussion of the brain. There is no absolute diagnostic criterion in such doubtful cases, and we are therefore bound to keep the patient under observation until the diagnosis becomes positive and certain.

Cases of cerebral apoplexy are continually being mistaken for alcoholic coma, and *vice versâ*. Those due to embolism are so sudden, the coma, if there be any, passes off so soon, and the hemiplegia is so complete, that an error can scarcely be committed. Those due to thrombosis also present so marked paralytic symptoms, and so little and so transient a coma, that they may also be dismissed from our consideration. The difficulty arises in cases of hæmorrhage into the brain. The diagnosis is uncertain in the two degrees of drunkenness—viz., in the stage of complete coma and in the noisy and uproarious stage. It is extremely difficult to diagnose complete alcoholic coma from that due to cerebral hæmorrhage, especially if the latter be into the pons or into the lateral ventricles. In ordinary cases of apoplexy there is some evidence of one-sided paralysis of the limbs or face, convulsions are of greater severity on one side of the body, and there is rigidity or spasm of one limb, or squinting. The pupils are frequently unequal, but I have seen this also in alcoholic coma. Unless we have some such distinctive features of a unilateral lesion in the brain presenting some well-marked unilateral symptom, we cannot come to a positive diagnosis. Two more points are left for observation. The patient's urine may give the alcoholic reaction. A chromic-acid solution (made by dissolving one part of bichromate of potash in 300 parts by weight of strong H_2SO_4) is immediately turned to a bright emerald-green by the addition of alcohol, either pure or contained in urine. This reaction is sudden and immediate, and, although other substances oxidise this solution and produce a similar colour, it is scarcely liable to any practical fallacy. Again, the patient may vomit, and the vomited matters may contain a large quantity of alcohol, or none at all, and so explain the nature of the case. The second condition—that of noise and excitement—is the one in which most mistakes are made, for the patient may have a serious and fatal lesion in his brain, and yet be able to struggle, swear, answer questions more or less rationally, put his tongue out &c., and hence even the most cautious and experienced practitioner may come to the conclusion that he is only drunk. Such an opinion is the more readily formed if the patient's breath smell of alcohol. We must remember that a man with a threatened attack of apoplexy feeling ill (for such cases are rarely absolutely sudden), may go into a public-house, drink some spirit, fall down in a fit, be picked up by a policeman, and taken to a hospital or police-station. In this case the breath would give an alcoholic odour, and the circumstantial evidence point to drunkenness, and yet the case be one of severe cerebral hæmorrhage. These cases of so-called "ingravescent" or "increasing" apoplexy begin with delirium or a convulsion, then there is partial recovery with confusion and headache, and after some time (from one or two even up to forty-eight hours) deep and prolonged coma sets in. Extensive hæmorrhage is always found, usually bursting through one corpus striatum into the lateral ventricle. Copious meningeal hæmorrhage is sometimes attended with a similar succession of symptoms. Again I must repeat that the general features of the case are not to be relied on for a diagnosis, and such individuals must be carefully watched, otherwise we may find that the patient is "not drunk, but dying," and so get much discredit.

Coma from opium-poisoning cannot be readily diagnosed except by the history. The minute contraction of the pupils is a valuable sign, but I have seen this as marked in alcoholic coma as in opium-poisoning, and in cases of hæmorrhage into the centre or into both sides of the pons it is a constant symptom. The stomach-pump must be used; for if this be carefully done, no harm results to an apoplectic, and it is far better that it should be resorted to, even in a case of cerebral hæmorrhage, than that a patient should die of opium-poisoning without proper treatment, owing to a mistake in diagnosis. The smell of opium may guide us to a correct opinion, and in prussic-acid poisoning the odour of the drug is so very characteristic and the collapse so marked that no error is likely to be made. In cases of poisoning by other narcotics, the odour of the drug and the history can alone guide us; but in all doubtful cases we must again appeal to the stomach-pump. In cases of uræmia we are also likely to be deceived if we trust to the general appearances of the patient, but an examination of the urine for albumen and renal casts, and of the patient for signs of dropsy or of hypertrophied heart as a consequence of chronic Bright's disease, will put us right. The fallacies here are, that a patient with chronic Bright's disease may also be suffering from alcoholic coma, as happened in a case under my observation; that one or more convulsions may be due to uræmia, or may usher in an attack of alcoholic coma; and that albuminuria may be due to congestion of the kidneys from poisoning by alcohol only. In one case in which coma was induced by the consumption of nearly two quarts of port wine, which were removed from the stomach by the pump, the urine was almost solid with albumen, and this all disappeared in two days. Lastly, we must remember that a patient frequently becomes comatose for a certain length of time after a severe epileptic fit.

I wish, therefore, to insist most strenuously on the difficulty of diagnosis in all cases of coma. The mode of procedure to be followed in order to arrive at a correct opinion should be something like the following. In the first place, the patient should be carefully examined for blows on the head or for fractures of the skull; and we should then see if there is any hemiplegia, unilateral spasm, rigidity, or convulsion, and if there is any squinting or facial paralysis. We should next look at the pupils, but not lay much stress thereon. "Conjugate deviation" of the eyes, as if the patient were looking upwards over one or the other shoulder, increased perhaps by a rotation of the head and neck in the same direction, is a very important sign of apoplexy, and diagnostic if present. The next step is to inquire for a convulsion, and to examine the tongue and mouth for bites, blood, or froth. After this the urine should be drawn off by a catheter, and tested for albumen and for alcohol. The heart must be carefully stethoscoped, and the position of its apex noticed. The legs should be exposed, and we should see whether they pit on pressure, and whether there is any puffiness of the eyelids or general œdema. If we are still in doubt, we must empty the stomach with the stomach-pump and examine the contents, again remembering that it must be used with especial care, and then no harm will be done to an apoplectic, and we may be led to the proper treatment, if the case is one of poisoning by alcohol, opium, or a narcotic poison.

Too much stress must not be placed on the history, although this must always be asked for. The general features of the attack are of but little significance from a diagnostic point of view, and we must not be misled by such unimportant and equivocal symptoms as the condition of the pupils and the smell of the breath. In the early stages of alcoholic coma and of coma from cerebral hæmorrhage the temperature is low, but it frequently rises in both to an excessive height before death.

I would add that in every doubtful case the patient must be kept under observation; and I am astonished that a small ward is not set apart in all our hospitals for the reception of such cases. As it is, we must either disturb a general ward filled with the sick and dying, or send the case to the police station, where perhaps he may die. A resident medical officer should not be compelled to choose between these alternatives—one laying him open to censure from the hospital authorities, the other leading perhaps to a verdict of "manslaughter from neglect" by a coroner's jury.

As the diagnosis of alcoholic coma is surrounded by so many difficulties, and a well-skilled medical man may fall into so many errors, or be able to form only a doubtful opinion, how absurd and wrong is it for such a diagnosis to be permitted to a policeman. Even when the cause of the coma is known, we must remember that alcoholic coma is due to *poisoning* by that liquid, and that in spite of the most energetic and best treatment a patient may die. Such cases, after being diagnosed, are therefore cases for a hospital, and not for the police-cell. What would be thought if we sent away cases of poisoning by other nar-

cotics?—and yet we should frequently do less harm than by following the present system of dealing with cases of alcoholic coma.

(To be concluded.)

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

ANCHYLOSIS OF BOTH HIPS; SUBCUTANEOUS DIVISION OF THE FEMORA WITH THE CHISEL; BEDSORES; PYÆMIA; DEATH ON THE THIRTY-SEVENTH DAY AFTER THE OPERATION.

(Under the care of Mr. BRYANT.)

THE following is the last of a series of cases of anchylosis of the hip-joint with malposition of the thigh recently treated by Mr. Bryant. Three cases have already been recorded in which Adams's operation was successfully performed (see "Mirror," Nov. 10th and 17th); but in this instance the necks of the femora were destroyed, so that Adams's operation could not be practised.

The notes of the case have been supplied by Mr. Lewis.

B. N——, a cachectic-looking boy, aged seventeen, was admitted into Job ward on Aug. 29th, 1876. He seemed to have had good health until three years before admission, when he was struck a violent blow on the left side of his sacrum by some boys, who afterwards stripped him and buried his clothes. It was raining at the time, and he caught a severe cold. Soon afterwards his left knee began to pain him, and almost immediately a sinus broke out on its inner side, followed by sinuses on both hips and knees, and also on the left side of the sacrum where he had been struck. He was under medical treatment for nine weeks. The sores on the various parts of his body began to heal up, and he continued to improve, being at last able to get up and move about, supported on crutches, which he used up to the date of admission.

He had a strumous look about his eyes, and a blanched appearance of the skin generally. Both his ankles and insteps were œdematous, his thighs seemed anchylosed, and flexed upon his pelvis. The right thigh was flexed at about an angle of 95°, and was adducted and rotated inwards to a slight extent. There was great thickening about the trochanter. The left thigh was equally flexed, but abducted and rotated slightly outwards. There was slight curvature of spine. Neither of the femora could be moved without the pelvis, both joints apparently being completely anchylosed. On the right thigh there was an immense amount of cicatricial tissue over the great trochanter, extending forward to anterior superior spine of ilium, and remains of old cicatrices. On the left lower extremity sinuses seem to have existed on the outer side of left buttock, on the inner side of upper part of popliteal space, and on anterior and inner side of left knee. There was a cicatrix on inner side of knee, caused by an old sinus which formerly existed there. A similar mark was on the outer side of the trochanter. On the left side of the sacrum a large cicatrix, about three inches in diameter, existed. There was also much thickening of the left femur towards its lower third, and possibly necrosis.

Sept. 5th.—Mr. Bryant having found, when the patient was under the influence of an anæsthetic, that the hip-joints were quite anchylosed, subcutaneous osteotomy was determined upon. He decided to divide the femora below the trochanter, because the necks to the femora were destroyed, and Adams's operation was not applicable. He determined also to employ for this purpose the chisel, as suggested by Volkmann. The right limb was operated upon first, and a punctured wound made with a narrow knife on the outer side of the thigh down to the femur, about two inches below the level of the tip of the major trochanter; a chisel was then introduced along the knife down to the bone, and with a few blows from the mallet applied to the chisel, the bone was broken. The operation took about three minutes. The limb was then readily brought down into the straight line. The same operation was subsequently performed upon the left limb, and no difficulties were experienced. The boy was then fixed in Mr. Bryant's double extensor splint and sent to bed. He slept a little during the night (temperature 99°, pulse 114), and everything went on well for a week, when a large bedsore came on the lower part of the sacrum. By the 21st (temperature 99·8°, pulse 114) the incisions had healed by primary union.

On the thirty-first day (Oct. 7th) a sinus had opened on an old cicatrix on the outer side of the right thigh, and discharged some thin pus. The bedsore was also worse; the operation-wounds had quite healed.

Oct. 9th.—Temperature 104·6°; pulse 150.

10th.—Temperature 103·5°; pulse 160. The bony prominences of the sacrum were quite bare in two places. He was put on a water-cushion.

11th.—Temperature 100·9°; pulse 176. He spoke incoherently.

12th.—Temperature 101·6°; pulse 154; respiration 66. He vomited his beef-tea, and died about 9 P.M.

The post-mortem examination (made by Dr. Goodhart) showed an old sinus near the right knee. Over the sacrum was a sore the size of two crown-pieces, laying bare a good piece of sacrum, which was discoloured brownish, and soaked with a dirty pus. A section showed its tissue infiltrated by pus, and all the soft tissues dissected away from it by surrounding suppuration, nearly half way up the sacrum—a most likely source of the pyæmia. There were several old scars about the hips, but on dissection there was very little disease. A small abscess was opened near the left anterior superior spine, but nowhere else. There was recent lymph nearly all over the pleuræ, and about two ounces of pus in the cavity. The lungs were studded with small abscesses. The peritoneum contained several ounces of thick pus, and was very much injected with small ecchymoses. The stomach was studded all over beneath the mucous surface with small ecchymoses. The spleen weighed nineteen ounces. There was an abscess on its free border the size of a hazel-nut; this had ruptured, and produced suppurative peritonitis. The pelvis of the right kidney was full of gritty matter from deposited urates. The pelvis was somewhat dilated, and the cortex wasted in places as if from old obstruction. Both hips seemed firmly anchylosed. The incision had cut through the femur on each side, about two inches below the tip of the trochanter. There had been no splintering of bone. The upper end on the right side projected forwards a good deal. The ends were not united on either side. The right knee-joint had some of its cartilage gone from previous disease. The left femur in its lower third was much thickened from osteitis of long standing, and a piece of necrosed bone was present, which piece could readily have been removed by operation. There were no sinuses running down to the seat of the operation, the operation-wounds being represented by scars.

ST. GEORGE'S HOSPITAL.

A PIECE OF KAMPTULICON FLOOR-CLOTH PASSED INTO THE MALE URETHRA AND RETAINED; REMOVAL.

For the following notes we are indebted to Mr. John Morgan, F.R.C.S., late house-surgeon, through whose ingenuity the case was brought to such a happy termination.

Some time ago a patient applied at the surgery of the hospital and gave the following story:—While at the closet that morning he fancied that his urine did not pass as freely as usual, and, with a view of correcting this, he had then and there trimmed up a piece of floor-cloth about seven or eight inches long, and about a quarter of an inch broad, tapering towards the extremity, and passed it as far as possible down the urethra. The introduction of this was, he said, attended with very little pain, but on attempting to withdraw it he found it impossible to do so, and after several unsuccessful attempts to urge it out from the outside of the penis he applied at the hospital for relief.

He was apparently a very healthy man, aged sixty years, and had never suffered from any previous difficulty in making water. A piece of kamptulicon floor-cloth pro-

truded for about half an inch from the meatus, and was firmly grasped by the muscular fibres of the urethra. The foreign body could be felt to extend along the whole course of the spongy portion, and was apparently broken into several small pieces by the previous manipulations. The man could micturate, the urine trickling slowly by the side of the kamptulicon. So firmly was the body grasped by the muscular spasm that it was deemed expedient not to attempt its immediate removal. There was no pain, and the patient appeared to treat the matter very lightly.

A full dose of opium was given, and after half-an-hour he was placed in a hot bath. By this means the spasm became so far relaxed that three pieces, each about three-quarters of an inch in length, were withdrawn with a thin pair of urethral forceps. No bleeding ensued, but the remainder was so firmly held that it was thought prudent to desist for a time from further interference. As the man refused to remain in the hospital, another dose of opium was given that night, and another the following morning, when he was again placed for some time in a hot bath, after which several smaller pieces, evidently softened by the urine and broken by the patient's own manœuvres, were removed with the forceps. As there was slight bleeding, nothing more was done at that time, but, after opium and hot bath next day, several more fragments were removed. When placed together the whole amount removed measured nearly seven inches in length. There was a good deal of discharge for two days, after which it subsided, and, as no more fragments could be detected, the patient was discharged quite well, and able to pass water freely and in a good stream.

THE QUEEN'S HOSPITAL, BIRMINGHAM.

CASE OF LACERATED WOUND OF THE KNEE-JOINT TREATED SUCCESSFULLY BY LISTER'S METHOD.

(Under the care of Mr. WEST.)

For the following notes we are indebted to Mr. Robert Bird Wilkins, house-surgeon.

Charles W——, aged fourteen, was admitted on August 20th, 1877, suffering from a lacerated wound of the right knee-joint, produced by getting between some cogwheels. The wound was on the outer side of the joint, and was about four inches long and two inches broad. The tissues around were considerably contused. The joint was opened, and two fingers could be introduced into it.

The patient was suffering from considerable shock; the hæmorrhage was not severe. The wound was washed out with a solution of carbolic acid, one to ten, and dressed with Lister's antiseptic dressing, five silver sutures being used to bring the lacerated skin as far as possible into apposition. A straight splint and an extension apparatus were applied to immobolise the limb. The wound was dressed antiseptically every day for a month, and the discharge from it continued perfectly sweet throughout, although all the contused tissues sloughed and came away. No unfavourable symptoms occurred, and the temperature, with the exception of the first two days, when it reached 100° F., remained normal, as did also the pulse and respiration.

On Sept. 28th the wound was so small and superficial that the antiseptic dressing was discontinued, and red wash used. It was then healing rapidly, was quite superficial, and was not larger than one inch by half an inch. The splint was still used, and the limb kept completely at rest. The joint was perfectly normal in size, there being no synovitis, and the outline of it was quite as distinct as that of the sound side. The patient did not complain of any pain whatever, and he ate and drank well. He could slightly flex the knee when the splint was taken off.

On Oct. 20th the wound had perfectly healed and no dressing was applied. The patient got up for the first time. He could walk very well, but the knee was kept stiff, although, when he sat down, he could flex it almost completely. There was no bony or fibrous anchylosis whatever.

Remarks by Mr. WEST.—This case is noteworthy from the absence of any constitutional disturbance after so severe an injury. Not many years ago, amputation would have been performed, so fatal was considered to be a wound of so large a joint. More especially is the case remarkable from the fact of the wound having been a lacerated one, and one in which there was more likelihood of constitutional disturbance than if the wound had been clean cut. By the adoption of the antiseptic treatment, although the lacerated tissues of a necessity sloughed and came away, so producing considerable discharge, yet there was no smell of decomposition, but everything remained perfectly antiseptic throughout; and, from my own experience, it is in these lacerated wounds that Lister's treatment is of such very great service. The fact of there being no anchylosis, either fibrous or bony, justifies me in saying that the lad will have the perfect use of his limb.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Lactic Fermentation and its Bearings upon Pathology.

THE ordinary meeting of this Society was held on the 18th inst., and was most numerously attended. The President, Dr. Murchison, occupied the chair, and the evening was devoted to a remarkably lucid and well-reasoned address from Mr. Lister (who was elected a member of the Society during the evening), who gave a complete history of his researches into the nature of lactic fermentation.

On the motion of Dr. Hare, seconded by Dr. Greenhow, it was resolved that, owing to the inconvenience of holding the annual general meeting upon the 1st of January, that meeting be held on Friday, the 4th proximo.

Mr. LISTER then commenced his address upon Lactic Fermentation and its Bearings upon Pathology. He said that a few years ago it would have been deemed very improbable that the souring of milk should have any bearing upon pathology, but the large and influential audiences which Dr. Sanderson's lectures, at the University of London, were receiving were sufficient evidence that the essential nature of fermentative changes is occupying a foremost place in the minds of pathologists. In reading reports on the discussions which had taken place upon diseases of such a nature—for example, that of pyæmia, at the Clinical Society,—it had seemed to him that medical men were apt to begin the inquiry of these subjects at the wrong end; to view them rather from the clinical than the pathological side. Then it seemed to him that, before any sure steps could be taken with regard to the nature of fermentative diseases in the human subject, it was necessary to have clear ideas, distinct opinions, and positive knowledge, on those fermentative processes which are the more simple, because they can be observed in our laboratories. It might be said that sufficient had been done in this direction by Pasteur and others; but this was not universally accepted, for there are men ranking high as physiologists and pathologists who take exception to the conclusions drawn by Pasteur on the ground that the organisms found in association with fermentative changes, such as putrefaction, are only accidental concomitants of the process, and not essential to it. Some time ago he had made an attempt in the special case of lactic fermentation to satisfy himself one way or the other as to the nature of the change. He succeeded in so satisfying himself, and it occurred to him that it might not be without interest to the members of the Pathological Society to see the preparations which led him to his conclusions before, from lapse of time, they should have lost their value. Still he should not have presumed to bring the subject before the Society had he not also some further points to add beyond those he had already published. First, as regards the method of experimentation, he had found that if an organic liquid, whatever it be, free from organisms, be placed in a perfectly pure glass (i.e., pure of anything living) which is covered by a glass cap also pure, that with a glass shade, and the whole placed on a plate of glass, no organisms would occur in the liquid. Or, in other words, although the atmosphere has free access to the liquid, for

the different coverings do not fit closely, yet the double protection is sufficient to exclude the atmospheric dust; and if the dust is excluded, organisms are prevented from occurring. The glasses are obtained pure by submitting them to a temperature of 300° F. for two hours. As far as his experience went, that heat was sufficient to destroy the life of all living material. But, in addition to this, the air gaining access to the box in which the glasses were heated should be filtered from dust, and the filtration was effected by having the door of the box packed round with cotton wool, which serves as an effectual filter. In order to heat the box equally throughout, a shelf was placed between the Bunsen's burner beneath and the bottom of the box, and at the same time a cover was put around the box, with a hole at the top to allow of the escape of hot air and the entrance of a thermometer surrounded by cotton-wool into the box, and the glasses to be purified being placed in it, the vessel was heated to 300° Fahr. for two hours, and when cold the glasses taken out, and known to be free from living organisms. The next step was to introduce the organic liquid in a pure state into such a glass. Mr. Lister said that he had previously described a very complicated method of effecting this; but he had now followed a comparatively simple plan. He used a flask provided with a second neck projecting from the side, and bent at an angle near its extremity. The commencement of the neck was large, and the terminal part short and narrow. With such a flask, the end of the nozzle is always valved by a drop of the fluid after passing, so that regurgitation of air through the nozzle can never take place. At the same time the mouth of the flask is covered with carbolised cotton wool (conveniently prepared by steeping the wool in a 1 per cent. solution of carbolic acid in anhydrous ether), and a cap of such wool is also placed upon the nozzle after the drop at its end has been removed by the application of a carbolised rag; so protected, the liquid will remain pure in the flask to be used again a week, a month, or a year hence. (Mr. Lister showed a flask of Pasteur's solution prepared on Aug. 7th, which remained perfectly clear.) Then, in decanting, and in order to protect the glass to be charged from contamination during the process, be substituted for the cotton-wool cap a hemispherical shield formed of half an india-rubber ball perforated to allow of the passage of the nozzle. The india-rubber, previously soaked in carbolic acid lotion, which it readily absorbs, was rendered antiseptic, and the hemispherical form of the cap prevented the collection of dust. In that way many glasses could be charged which would remain with their contents unaltered till they dried up from evaporation. The flask in which the organic liquid was stored was first purified by heating in the hot box; and the question then was how to introduce into it a pure liquid, uncontaminated by atmospheric dust. This could easily be done in the case of unboiled urine, for if the urethra and bladder be healthy, all that had to be done was to apply a solution of carbolic acid (1 in 40) to the glans penis and the meatus, and the urine passed directly into the flask. It would remain with its vesical mucus for any length of time without any bacteria arising in it. It was, however, impossible to get milk pure to start with; it was necessary to purify it with heat. He did not know what heat would be necessary for this purification in the densely-populated metropolis he had come to, but in the comparatively pure metropolis he had lately inhabited he had never found any of the organisms present in milk to resist a temperature of 210° F. for half an hour—i. e., in the moist state. His plan was to introduce the flask containing the liquid into a saucepan of boiling water, and in consequence of a certain amount of evaporation, the temperature in the flask was somewhat short of 212°. This was an advantage, for no frothing occurred in the fluid from its ebullition. It was necessary also to introduce the liquid into the *lower* part of the flask, taking the greatest care that not a single drop should come in contact with the upper part, which would not be heated to the full heat of the saucepan. Using a funnel previously purified by a 1 in 20 solution of carbolic acid, and passing this through a wrapper of cotton-wool in the mouth of the flask, the liquid could be poured into the latter, precaution being taken on the withdrawal of the funnel that it did not touch the sides of the flask, which was then immersed in the boiling water. In this way he had filled the flask with Pasteur's infusion, turnip-water, urine, &c., and always succeeded in preventing the development of organisms. But with milk the same proceeding constantly failed. Some might have said that the reason of this failure depended upon the existence in milk of complex substances ready to develop into organisms, and which resisted the influences to which they had been subjected, the more simple materials in Pasteur's solution being more readily acted on. But, for his part, he felt sure the failure was due to some defect in the methods employed, and he soon found an explanation in the fact that in pouring fluid through a funnel it carries air-bubbles with it. Now milk is a pabulum for all kinds of organisms; nearly all varieties of bacteria (and there are indeed very many varieties) will live in milk; whereas only a small proportion of such organisms will live in Pasteur's solution. To obviate the introduction of air containing bacteria, he substituted a syphon for the funnel; the syphon being composed partly of glass and partly of india-rubber, upon which a clip was placed. The syphon being previously filled with water higher than the temperature of the air (so that no bubbles could be formed in it during the process), it was then easy to introduce the liquid to the bottom of the flask without introducing the smallest bubble of air. Again, in withdrawing the syphon, care must be taken that it does not touch the edge of the flask. Since he had adopted this method, he had charged many flasks with milk which had been heated to 210°, and had never failed in keeping them free from organisms. He showed a flask which had been so charged on August 7th, and the contents of which remained as pure now as on that day. Mr. Lister remarked that this failure and its correction were instructive, as showing that the development of organisms under circumstances in which they might not be expected to develop was liable to be explained by fault on our part—defects in our manipulation. Having thus described at length the method of experimentation, Mr. Lister proceeded to say that he had selected lactic fermentation, first, because of its remarkable character, peculiar in the solidification it gave rise to, and in the marked souring of the milk accompanying it; and, secondly, because the ferment causing it is a *rare* ferment, and, if it be a rare ferment, it was not likely that any accidental defect in the manipulations would cause its introduction. It was rare in the sense that it was present only in dairies; there it seemed to be universal, but in the world in general it was rare. Thus, if specimens of boiled milk be exposed in different places—anywhere, in fact, except in a dairy—fermentative changes would be set up, organisms would develop; but it would certainly not be the lactic fermentation, nor would the organism peculiar to it—bacterium lactis—be found. This bacterium is motionless, occurs mostly in pairs or in leptothrix chains, or in groups of three or four, and is invariably present in souring milk. But it does not appear as the result of mere exposure to the air. He showed several test-tubes, containing milk which had been received into a pure glass direct from the cow, at a short distance from a dairy. Every one of them had undergone fermentative changes, and in some of them simple examination with a lens showed the presence of filamentous fungi, apparently of five different species; so that, in spite of the care taken, organisms had entered, but none of them had undergone lactic fermentation. They contained bacteria and fungi of all sorts, some as scarlet spots, others as golden-yellow, but not one of them contained the bacterium lactis. Mr. Lister showed also another set of glasses containing milk taken with greater precautions, in which it might be supposed that no change had occurred, but on microscopical examination some were found to contain bacteria; one or two remained free, showing that unboiled milk has no ferment in it tending to organic development. He had found also that by adding drops of water to series of glasses of boiled milk fermentative changes may be set up, but not the lactic fermentation. By means of a graduated syringe he could introduce so small a quantity as one-hundredth of a minim of water into a glass of boiled milk; and he found that, taking ten glasses, in some of them organisms appeared, and fermentative changes took place, but others escaped these changes altogether. Moreover, different fermentations occurred in different glasses. This proved the fact pointed out by Dr. Sanderson that the fermentative agency in water is not in a state of solution, but in the form of suspended particles. For were it in solution then there would be no reason why some of the milk should escape

altogether, and some again be the seat of changes different from what took place in others. But he would again insist that, various as these fermentations were, no instance of lactic fermentation occurred. This then pointed to the fact that the souring of milk could not depend on anything inherent in the milk itself, but something introduced from without, and that not present in water or in the air in general, but only in dairies. But even in a dairy he once exposed a specimen of boiled milk for fifteen minutes, and the result was a growth of filamentous fungi and a peculiar bacterium, which was associated with a curious viscidity which he could only liken to that of a spider's web, so that he was able to draw a thread of the altered fluid up by a needle for a distance of a yard and two inches before it broke; but the bacterium lactis did not occur; and this was the only occasion on which he had not found it develop in milk exposed in the air of a dairy. Before proceeding further Mr. Lister said that he wished to make a confession. Next to the promulgation of new truth the best thing a man can do is the recantation of published error. Some years ago he published in the *Microscopical Journal* a description of the behaviour of bacterium lactis in different liquids. Thus inoculating a specimen of urine with sour milk, he found developed a small, long, motionless spirillar bacterium, and a second inoculation from the first produced similar appearances. From the product of this second inoculation he inoculated some Pasteur's solution, and got active bacteria as a result. Then by a reverse process he reproduced the spirillar form in urine, and inoculating milk with this he reproduced lactic fermentation. He also thought he could distinctly trace transitions between all these forms, which he believed to be bacterium lactis modified according to its environment. Having lately adduced these as facts in an argument with an eminent physiologist who, on hearing them, said they carried conviction to his mind, Mr. Lister thought that he would repeat the experiments, seeing how valuable a support they rendered to his views. But this time he got quite a different result, for in the inoculated urine, instead of the coiled motionless organism, he got an active double bacterium, whilst in Pasteur's solution he got a motionless bacterium. How could these irregular and discordant facts be explained? Obviously on the ground of some accidental contamination; and he was determined to get rid of accidental concomitants which would lead to the development of bacteria other than bacterium lactis. To do this he diluted the milk with so much boiled water that there should only be on an average a single bacterium to every drop of the inoculating fluid. Then, as in souring milk the bacterium lactis is in enormously larger proportion than other forms, the chances would be that the drop would only contain bacterium lactis. He therefore counted the number of bacteria (which were active as well as motionless) in a specimen of souring milk, and he found that the amount of dilution necessary for the purpose above mentioned was 1,000,000 parts of water. This dilution effected, and urine inoculated with a drop of the diluted milk, he got developed in the urine the bacterium lactis; but so small in size, and so scarce in quantity, that, if any other bacterial forms had been present, the latter alone would have been seen. Then inoculating a specimen of Pasteur's solution from the urine containing the bacterium lactis (and, to ensure the result, using a "separation tube," so constructed with a plug of wool in its interior as to allow only moving organisms to pass through it), he could not obtain any result. Repeating this experiment by direct inoculation with the diluted sour milk, it was found that no development ensued in the liquid, but after a long time the morsel of curd introduced was replaced by a mass of minute bacterium lactis, showing that while the Pasteur's solution did not prevent the development of the organism, it afforded no pabulum for its support. Therefore, it seemed that he was in error in the inference he drew from his former experiments. Excluding the chances of accidental contamination, he failed to get the results he then did. Knowing, then, how extremely numerous these organisms are, we can understand how such fermentations arise; and ascertaining how many bacteria there are in one-hundredth of a minim of milk, we can find how much water should be added, so that one drop should contain one bacterium. But it was hardly likely the bacteria should be uniformly distributed for inoculating ten glasses of boiled milk by such diluted drops. Five of them had been affected with lactic fermentation, and five had remained fluid. A drop of the fluid from one of these was under the microscope. No bacteria could be seen in it, only the milk globules were becoming angular from drying. Mr. Lister showed a glass containing milk which had undergone simply lactic fermentation. The curd was of a pure white, and the milk had a sour odour. But in others, which had been allowed to "sour" in the ordinary way, numbers of other organisms were present, producing other fermentations, such as the butyric, that produced by the oidium lactis, &c., and finally the putrefactive. It had been shown that in water the fermentative agency occurs in the form of suspended particles, and not in solution; and the experiment just recorded proved the same with regard to the lactic fermentation. For supposing even, for the sake of argument, one admitted the most unwarrantable assumption that each drop contained chemical particles capable of self-multiplication as rapidly as bacteria (and a bacterium may be watched to double itself in an hour), it would be quite inconceivable—the bacteria then being mere accidental concomitants—not only that the inorganic particles and the organised should be present in precisely the same numbers, but that they should always go in pairs, so that every drop which started the lactic fermentation should also contain a bacterium. For in every glass in which the fermentation occurred the bacteria were found. This demonstrated an important point, which may be applied to other instances. The sour smell accompanying the pure lactic fermentation was an interesting subject of inquiry. It could not be due to lactic acid, because that is absolutely non-volatile; and it was different from the odour of butyric acid which prevailed in ordinary souring of milk. Mr. Lister had distilled some milk which had undergone the pure lactic fermentation, and found the distillate to have still a pungent odour, but it did not have an acid taste nor affect litmus paper. Hence he concluded the sour odour must be due to some form of ether or allied substance the nature of which he must leave to the chemists to determine. Mr. Lister then called attention to a diagram upon which were drawn to scale various forms of bacteria, and he drew attention to the fact that the bacterium lactis developed after dilution with 1200 parts of water was of extremely small size, the particles approaching the minimum visible, their grouping alone determining their nature. Compared with them the torula cerevisiæ appeared large; in fact the bacterium lactis was not so large as the granules in the torula. Was it not conceivable that there might exist other organisms as much smaller than the bacterium lactis as that was than the torula? and, admitting the probability of this, we could conceive of the existence of ultra-microscopical organisms. Therefore he held that because we do not find any organisms in many morbid conditions—e.g., erysipelas (which he had repeatedly examined to this end)—yet the existence of such may be as real, and they may produce as potent effects, although we may not be able to see them with any microscope that we have, or be likely to see them with any microscope that will be produced. He had found that in three days the bacterium lactis diminishes much in size, so that to see it in its best and largest condition it was necessary to inoculate a drop of boiled milk by dipping into it the point of a needle just dipped into sour milk, and then examine the drop. In twenty-four hours the bacteria would get smaller, and at last the majority would be so small, and so entangled in the curd, like blood-corpuscles in coagulating fibrin, that they may not be seen. Some years ago he found that after keeping some tap-water in a pure flask for forty-eight hours he could detect a bluish film on the surface, composed of bacteria of extreme minuteness, and he could not doubt that they had existed in the running water, but from their size had been invisible. It must be remembered also that in the experiments he had related the organism produced the fermentation in the hundredth of a minim—that is to say, in a drop which would cover a surface of half a square inch. One might travel for a whole summer day over such a field and fail to find a bacterium, even if it were of large size, but when to this is added the extreme minuteness, who would venture to say that because they could not *see* the bacteria they must be absent? He had never had evidence of a microscopical germ; but he was aware that only in two

forms, one of which was bacillus anthracis, had evidence of such spores been adduced. Indeed it was very probable that bacteria do not require a germ. They are, as it were, reproductive organs in themselves, and if there be any organisms in existence which do not require a germ, bacteria are such organisms. Thus, concluded Mr. Lister, what appears to be a somewhat needless mystery may be capable of a very simple explanation.

The PRESIDENT, in thanking Mr. Lister for his communication, said that it was the custom in some sister Societies for members on their admission to deposit with the Society a specimen of their art. Mr. Lister, in joining the Pathological Society, had communicated to them a specimen of his experimental skill and scientific learning which would be deposited in their annals.—Dr. BASTIAN said that they were much indebted to Mr. Lister for the clear and lucid manner in which he had described to them his methods of experimentation. He himself had had no experience with experiments of the kind which Mr. Lister had brought before the Society, but in the main the experiments concerned organic fluids which have been protected from external contamination, and the assumption is that within the body these fluids are free from the germs of these organisms. He would draw attention to one or two facts bearing on this, because the subject was a broad and an intricate one, so that workers acting independently may arrive at apparently discordant results. He admitted that Mr. Lister's experiments seemed to be convincing as to the truth of the conclusions which he drew from them, and that it seemed difficult to find any flaw in them or in his reasoning. But he would ask whether, under other conditions, the same conclusions would still be possible. For example, if a healthy animal be killed suddenly, and allowed to remain in warm weather for a few days it putrefies, and organisms are found in great abundance in the interior of organs, such as the spleen and kidneys, or even further removed from the alimentary canal (which contains abundant organisms during life), such as the brain. It could not be supposed that they migrated from the alimentary canal, for they have no power of progression, and the only difference in condition was that the fluids of the body were in contact with dying tissues, which were admitted by Mr. Lister and others to be free from the germs of these organisms in the living healthy body. Then also organisms can be made to appear at will in any part of the tissues of certain animals. Thus, Dr. Sanderson, by introducing some boiled ammonia beneath the skin of a rabbit or guinea pig, found organisms develop there in ten or twelve hours; and the same result followed the injection of iodine into the pericardium. Dr. Sanderson had performed these experiments, taking care to exclude the possibility of external contamination. Messrs. Cunningham and Lewis, of Calcutta, starting from the fact that organisms do appear in the tissues after death, have brought about local changes of nutrition—e. g., by ligature of one renal artery they found, twenty-four or thirty hours afterwards, abundant vibriones in the kidney, the artery of which had been tied. Dr. Bastian had also lately found, on examining the embolic patches in the spleen and kidney in a case of multiple embolism from heart disease in a boy, that in these patches vibriones occurred, but not in the organs at a distance from them, and blood collected in capillary tubes from the right ventricle, from the surface of the lung, and urine from the bladder contained no organisms. The post-mortem was made in September, and very shortly after death. Time would not allow him to enter into any criticism of Mr. Lister's views, but he must hesitate to draw any conclusion unless the facts obtained by Mr. Lister be contrasted with the other set of facts which he had indicated.—Dr. BURDON SANDERSON expressed the extreme pleasure he felt in listening to the beautiful exposition of the facts of fermentation which Mr. Lister had given them. He fully concurred in his conclusions, and also in what he had said concerning germs, about which he himself had lately been at variance with Professor Tyndall—viz., as to the absence of microscopical evidence of germs or bacteria. Professor Tyndall has given us a definition of a germ—"Anything which germinates," without reference to its being visible or not; but Dr. Sanderson agreed rather with the position also assumed by Mr. Lister, that we have no evidence of any antecedent germs in the case of bacteria, the organisms of splenic fever being peculiar in this respect. He moved a vote of thanks to Mr. Lister for his communication.—Dr. BASTIAN seconded the motion, which was carried by acclamation.—The PRESIDENT congratulated the members on having elected Mr. Lister a member of the Society, and hoped that he would frequently contribute to their proceedings.

The Society then adjourned.

CLINICAL SOCIETY OF LONDON.

Convulsions treated by Venesection.—Excision of Ankle-joint.—Osteotomy in Rickets.—Subcutaneous Fracture of Exostoses.

THE ordinary meeting of this Society was held on the 14th inst., Mr. Bryant, vice-president, in the chair.

Dr. BROADBENT read notes of a case of Convulsions treated by Venesection. A gentleman, aged about forty one, who had had syphilis when young, and twelve months before had received a severe injury to the head, and was supposed to have had fracture of the base of the skull, had an attack of convulsions while in bed early in the morning of July 23rd, 1877. On the 25th he said he had suffered a little from headache, but was then quite well, but while in conversation momentary suspensions of consciousness were observed, and there were present on the forehead and chest innumerable capillary extravasations. He had always lived generously, but without going to excess, and had recently resumed his usual habits after long care and abstinence, rendered necessary by the injury to the head. About 2.30 or 3 A.M. on July 26th, the patient was again seized with convulsions, which continued to recur every fifteen or twenty minutes in spite of appropriate treatment by Dr. Gaven, and Dr. Broadbent was called in. At this time, 7 or 7.30 A.M., the patient was, as he had been from the first, perfectly unconscious. During the intervals he moaned loudly, and tossed restlessly, and the face had an expression of suffering. There was no evidence of paralysis; the eyelids were firmly closed, and resisted the attempts to open them; the pupils were equal and of moderate size. Pulse small and weak, but long. As the convulsion came on the moaning ceased and the eyes were widely opened. There was then a prolonged groan and scream, and all the muscles of the body and limbs were affected by synchronous violent jerkings. As the attack progressed the face became livid, the pulse imperceptible, the respiratory movements ceased, and it seemed as if death must have ensued had not Dr. Gaven at the critical moment depressed the tongue, and performed artificial respiration. Calomel had already been placed on the tongue, mustard applied to the calves, and chloroform administered. On consultation it was resolved to bleed, and a vein was opened by Dr. Gaven, and thirty ounces of blood abstracted. Another convulsion came on, not less violent than the previous ones, but it was the last, and the convulsions having entirely ceased, the patient gradually regained consciousness on the same day, could speak on the next day, and was soon able to leave town. The chief reason for the employment of venesection was the urgency of the case. Every convulsion was attended with danger to life, and the repetition of the attacks was likely to injure the brain, especially at the patient's time of life. The condition on which the convulsions depended was not known, but they were probably due to the state of the cerebral circulation, and therefore capable of being influenced by the bleeding. The injury had probably left thickening of the membranes of the base, which might interfere with the movements of the blood or with the interchange between blood and cerebro-spinal fluid. The patient was, moreover, in too plethoric a condition, and had been living too generously considering the date of the injury. Finally, the state of the pulse and of the general circulation was similar to that which accompanies uræmic convulsions, for which bleeding is found most useful. The amount of blood taken was rather large, and was greater than was originally decided upon—i. e., twenty ounces; but the heart did not falter, and the pulse became large and soft as the blood flowed. The mere loss

of blood was a trifle in comparison with the danger to be averted, and Dr. Broadbent had often had to regret that venesection had not been recommended, or had been put off till too late, or that too little blood had been taken; never that bleeding had been practised unnecessarily or too largely.

Mr. GEORGE BROWN read notes of a case of Puerperal Convulsions treated by Venesection. The patient, thirty-six years of age, was attacked with nausea and vertigo, followed by convulsions, seven hours after labour, which was quite natural. The urine contained one-third albumen, and the fits recurred in rapid succession. The patient becoming livid, and evidently in great danger from the severity of the fits, thirty ounces of blood were withdrawn. This was followed by a diminution in the intensity and frequency of the fits. The breathing became quieter, but unconsciousness persisted, with the exception of a short interval on the day of her death, which occurred six days after the onset of the convulsion. Mr. Brown argued that the venesection prolonged life, as it had marked effect in reducing the frequency and violence of the fits, and he should resort to bleeding again in a similar case.

Dr. CLUTTON said that two months ago he was called to see a man, about fifty years of age, who was said to have had a fit. He found him in an unconscious condition, and with a strong bounding pulse, and learnt that he had been bled to the extent of sixteen ounces by a medical man who had seen him in the fit. Whilst the arm was being bandaged another violent convulsion came on. An aperient was administered, and ice ordered to the head. The patient had two more fits after this, and next morning was still comatose, but the following day the coma gradually diminished. It was then learnt that before the first fit he had been knocked down in the street. In the afternoon of the third day he was sufficiently sensible to pass urine, which was found to contain albumen. He continued to improve, but is still to a certain extent aphasic, misusing words, and his memory and eyesight are defective, his vision being normal for distant objects, but power of accommodation appears to be lost.—Dr. ALTHAUS was not convinced that in Dr. Broadbent's case the bleeding had done good; for he had often seen convulsions rapidly ceasing, and recovery ensuing, without interference. Moreover, convulsions were due to anæmia rather than to hyperæmia, which was the consequence and not the cause of the fits. Death in convulsions was generally due to spasm of the glottis. Was depression of the tongue practised to avert that? He also inquired if there was albuminuria, to which Dr. Broadbent replied in the negative.—Mr. HOWSE asked if Dr. Broadbent had any evidence in support of his assertion that convulsions have a damaging effect on the brain-tissue. If this were true, surely any treatment to cut short the fits was justifiable.—Dr. WILTSHIRE thought there was no doubt that convulsions were injurious *per se*. Some years ago he saw a child who became idiotic after convulsions; and Sir W. Jenner used to teach that continued convulsions did damage the brain. Dr. Langdon Down also held this view. If in Dr. Broadbent's case the surface-veins were full, that would be a strong indication for bleeding, especially with a small, feeble pulse, showing emptiness of the arteries. He believed that venesection should be performed more frequently than it was, and that the occurrence of visceral congestions should not be lost sight of. He considered Mr. Brown's case to be probably one of embolism, in which case bleeding could do no good.—Dr. MYERS could testify on his own personal experience to the efficacy of bleeding in certain conditions of disordered cerebral circulation; for when serving in Africa he suffered intensely with head symptoms after great strain and mental shock, and felt persuaded that his only chance of recovery lay in his losing blood. Accordingly he performed venesection on himself, and, as no blood flowed from an opening he made into a superficial vein in the left forearm, he repeated the operation on a larger vein on the right side, and drew blood to the extent of ten ounces. The effect was immediate, and he feels sure that in this way he saved his own life.—Dr. BROADBENT, in reply, thought there could be no doubt as to convulsions leading to permanent change in the brain. He had seen cases in which patients had suffered both in general health and in mental faculties after convulsions. This was especially the case where the attacks occurred late in life. The risk from suffocation in the case he had read occurred at the end of the convulsion by the tongue falling back on the epiglottis. If Dr. Althaus meant to say that he still held to the opinion that all convulsions are the result of cerebral anæmia, then he must differ from him. He himself believed that a large proportion of cases were not to be explained on this hypothesis. If it were true, then the bleeding could not have done good in this case; but Dr. Broadbent had never seen the status epilepticus so suddenly put an end to as it was here. He had seen many cases in which venesection had given relief, especially in uræmic convulsions; but caution should be used in taking the hardness of pulse as an indication, for in protracted cases this hardness disappears because the heart is exhausted. It will be noticed, however, that the pulse is as full between the beats as it is during the passage of the wave. The pulse in the case described resembled that in uræmia, and, whilst the blood was being withdrawn, it became larger, and felt softer. The superficial veins were quite small in this case, and the absence of superficial venous congestion in a case of apoplexy once caused Dr. Broadbent to fail in drawing blood, although more than one vein was opened. Then the patient was attacked with convulsions, and the whole condition of the circulation was reversed, and the veins and arteries became full. But this coincided with extension of the hæmorrhage into the cerebral ventricles.

Mr. BARWELL related the cases of two patients upon whom he had performed Excision of the Ankle-joint, the operation consisting in removing the ends of the fibula and tibia after the protrusion through skin-incisions on the outer and inner side of the joint respectively. Mr. Henry Lee's suggestion to protrude the tibia through the wound on the outer side added to the difficulties of the operation, besides causing much displacement of the soft parts. In one of the patients (shown to the Society) the foot is slightly everted, and there is apparently a short flexible band between the astragalus and end of tibia.

Mr. BARWELL also showed a case in which he had operated for Rickety Deformity of the Tibiæ. The operation was performed with Volkmann's chisel, and with antiseptic precautions, the limbs being afterwards put up in plaster of Paris. The temperature had never risen above 100°, which it reached the night after the operation. Mr. Barwell referred to the operation described by Mr. Howard Marsh in the Medico-Chirurgical Transactions, in which the bone was cut through with a saw, and in one case a wedge-shaped piece of bone removed. This procedure was more severe than that adopted in the present case. In this case one tibia was divided on Oct. 25th, the other on Nov. 1st, and although the deformity is now almost entirely cured, the child does not walk well at present. Mr. Barwell showed also a photograph of a case of extremely Bowed Legs, in which, on April 12th, he divided both the tibia and fibula with the chisel at the junction of the lower and middle third, and then put the limb up in plaster. On May 3rd he divided the femur in the same way, and six weeks after the operation the patient was able to walk about. Complete recovery was, however, retarded by her sustaining a fracture of the right thigh.

Mr. MAUNDER read notes of, and exhibited two patients whom he had submitted to a novel method of operation for Exostosis—"true Subcutaneous Treatment by Fracture." The first was a case of exostosis of the femur in a girl fifteen years of age, admitted into the London Hospital on June 23rd, 1874. She had for many months suffered from pain and discomfort at the back of the left knee, and was unable to extend the leg fully upon the thigh. When walking she could only get her toes to the ground. On examination a bulging of the thigh, just above the external condyle, could be seen, and this proved to be caused by a pedunculated exostosis at the back of the femur on its outer side, just at the junction of the epiphysis with the shaft. The body of the tumour seemed to press against the tendon of the biceps and the external popliteal nerve. To relieve pain and enable her to walk, an attempt was made to dislodge the tumour. Abscission was discountenanced from the risk of suppuration, osteo-myelitis, &c., and fracture of the pedicle by violence, without any wound whatever, was preferred to subcutaneous division of the pedicle with the saw or chisel. One of three results Mr. Maunder anticipated might follow this procedure: necrosis of the fragment and its extrusion by suppuration, which probably

would not take place until all risk of extension of the suppuration to the femur had been prevented by closing in of the bone-cells opened by the operation; or absorption of the body; or its reunion, but possibly in such a position as no longer to interfere with the patient's comfort. On July 8th, 1874, the skin being protected by a piece of chamois leather, Mr. Maunder seized the tumour with a pair of gas-fitter's pliers, and by a sudden jerk broke the pedicle. Ice was applied for two or three days, some local tenderness, swelling, and ecchymosis resulting from the operation. In spite of passive movements reunion occurred, but the body of the tumour occupied a new position, and caused no further discomfort. The second case was that of a girl fourteen years of age, admitted into the London Hospital in February, 1877, with a rather large pedunculated exostosis attached to the inner edge of the tibia, just below the internal tuberosity. The swelling appeared first two years ago after a sprain of the right knee. A like operation to that in the first case was performed, but with a different result. The pain and inability to walk have been removed, but the tumour has not reunited to the shaft of the bone; and its mobility can readily be recognised.

Mr. MYERS asked Mr. Barwell what portions of the ankle-joint were excised in his case, and also how the child walked before the operation?—Mr. HOWARD MARSH said that Mr. Barwell had not explained the conditions minutely enough to enable them to judge of the value of his operation for excision of the ankle in the case before them. He himself relied in many cases of joint disease in children upon complete rest rather than upon excision, which, as a rule, was to be deprecated. As regards division of bones in rickets, Mr. Barwell did not seem to have understood the differences in the two operations he had described in the Medico-Chirurgical Transactions. In two cases he divided the bones by the small saw, but in the other case—one of extreme forward bending—the angle of the bend was cut out. That procedure involved the effects of a compound fracture. In the two cases in which the slighter operation was performed, the temperature did not rise above 100°, except once, when it was 101°. Mr. Marsh did not think the patient shown by Mr. Barwell to be bad enough to have called for operation, and as her walking power did not seem improved, he supposed the operation was undertaken solely to relieve the deformity. The longer he watched cases of rickets, the more he was persuaded that even badly-curved limbs become straightened under the use of splints, administration of cod-liver oil, &c. A child with marked deformity at two years of age would have straight legs at four, there being almost a spontaneous tendency towards straightening.—Mr. MAUNDER pointed out that in the case of well-to-do patients, able to have constant surgical supervision, as well as country air, the seaside, good food, &c., it was possible to save joints the seat of gelatinous disease; but in hospitals circumstances were different, and many cases progressed from bad to worse, and required operation. So was it with bent legs, for the poor could not attend efficiently to their children in the application of splints &c. Excision of the ankle-joint for disease was not much in favour, probably owing to the experience of Mr. Syme, who resorted to his operation at the ankle joint on the ground that caries was liable to recur in tarsal bones left after partial amputation of the foot. Mr. Maunder did not think this held true of the ankle-joint; and he pointed out that after excision the relative position of the bones of the foot is unaltered, and the normal arch preserved, unlike what occurred in partial amputation of the foot. He feared that in Mr. Barwell's patient the operation would be, to a certain extent, a failure, the fibrous band being long and yielding, as though either too much bone had been cut away, or the surfaces had not been sufficiently approximated during repair. The child walked with an unsteady gait, and the foot was in a position of valgus, and would probably always require mechanical support.—Mr. CROFT had performed excision of the ankle in three cases. He had not made the lateral incisions described by Mr. Barwell, having been able sufficiently to reflect the soft parts from before backwards. In one case he had obtained bony anchylosis, a result always to be desired, but depending largely upon the age of the patient. He thought it likely that the union in Mr. Barwell's case would become firmer in time. The subperiosteal method of excision of the ankle had been rather neglected; in one case he separated the periosteum from the end of the fibula, which was removed, and obtained a thick mass of bone on the outer side of the ankle. He referred to a case of pedunculated exostosis of the tibia which he had treated in the same way as Mr. Maunder had his cases. It occurred in a boy eleven years of age, and the operation enabled him to freely move the leg about.—Mr. HOWSE said that operations for rickety deformity were only applicable to extreme cases; and it was to those that Mr. Marsh, in his paper, restricted it. None of the speakers had laid stress upon that kind of oblique deformity—a combination of the anterior and lateral curves—in which splints could not be well applied, but which was readily met by operation. Treatment by mechanical means lasts over years, and the element of time in the treatment of them often of the highest importance to patients, especially the poor, was too much neglected by surgeons. Four out of five cases of the double curve in the tibia he had referred to, on which he had operated, did well; in the fifth, a child twelve years old, he removed a wedge-shaped piece of bone, which was dense and ivory-like. The case took long to recover, but the limb is nearly straight, and the child can walk well. — Mr. W. H. BENNETT referred to cases of exostosis lately under Mr. Holmes's care. In one the pedicle was divided by the chisel, and the detached exostosis, which was then the size of a walnut, has since increased in size, whilst fresh bony growth has occurred at its place of separation. In another case an exostosis of the thigh was spontaneously fractured by a fall; there had been no recurrence here, the difference from the first case probably being that here the growth was stationary at the time of separation, and not active.—Mr. BARWELL said he had always obtained bony union in excision except in this case. He had not adopted any extension, but simply suspended the limb in a plaster splint; and he thought that the time since the operation (six weeks) was too short to say that the union will not yet become bony. The excision was performed for strumous disease, which had been suppurating for months. He quite admitted that time and rest would do much for diseased joints. He restricted the performance of osteotomy in rickets to those cases in which the deformity was very marked. He gave Mr. Marsh the credit of being the first to introduce this operation. He thought both his own cases showed its value. He should deprecate it when the bone could be straightened by simply bending it.

The Society then adjourned.

MEDICAL SOCIETY OF LONDON.

The Prognosis of Mitral Insufficiency.

THE ordinary meeting was held on the 17th inst.; Dr. G. Buchanan, President, in the chair.

An interesting paper was read by Dr. ANDREW CLARK, entitled "Some Observations on the Prognosis of Mitral Insufficiency." In introducing the subject of his paper, Dr. Clark remarked that a considerable amount of hospital practice without a large amount of private practice was apt to lead one to acquire the habit of a fatal prognosis, and to attach to the name of a malady the judgment which belongs entirely to its final and not necessary issues. We must remember, however, he said, that in dealing with hospital cases we are usually ignorant of the duration of the disease, and we often fail to realise and to estimate at their just value, the effects of the unfavourable conditions in which too often the poor are placed. Dr. Clark observed that it was to general practitioners of long standing, and who possessed the faculty of critical observation, that we must look for help in settling the vexed question of prognosis; and he suggested that though they had not the time to give to literary composition, yet they might do much to clear up the matter by giving answers to well-devised questions. Dr. Clark then proceeded to consider the question of prognosis in mitral regurgitation. What the prognosis was forty years ago was illustrated by several cases. One was that of a gentleman who was condemned to die in less than six months, and who forty years afterwards was alive and in the enjoyment of good health. Another, that of a gentleman who in 1855 had a loud mitral systolic bruit, with slight congestion at both bases, and who is now, in his

eighty-fifth year, in the enjoyment of fair health. What the prognosis of mitral regurgitation was now could, he said, be learned only with difficulty from the writings of eminent authorities, and their statements were most conflicting; still, on the whole, Dr. Clark believed that prognosis had become more favourable, and that the grounds for forming a favourable prognosis were being brought steadily to light. That the fact that children with what seems organic valvular disease, grow up to be men and women, who to all appearance enjoy excellent health, tends to this view. In order to calculate the prognosis of a given case, Dr. Clark urged attention to the following points:—The family history of the patient; his age; his previous and present health; his habits, occupation, and general surroundings; the character and conditions of the murmur; the state of the heart as to dilatation or hypertrophy, and especially the state of its muscular tissue. The following points were enumerated as being against a favourable prognosis:—A family history of heart disease or of gout or rheumatism; a history in the patient himself of gout, rheumatism, gravel, ague, or other affections which sensibly influence the condition of the heart; the habit of dietetic indulgences, especially the habit of "swilling large quantities of fluid," laborious callings, life in a low damp situation, &c. Dr. Clark pointed out strongly that of all single conditions acting unfavourably on the prognosis of this malady deterioration of the muscular substance of the heart is the worst. Dr. Clark next touched upon the chief factors which appear eventually to bring about a fatal issue in cases of mitral regurgitation—viz., pulmonary and renal congestions, failure of ventricular power, and progressive dropsy, and he stated that they exercised their influence more speedily or more slowly as they are helped or hindered by the favourable or unfavourable conditions. Dr. Clark remarked that the relative place occupied by mitral insufficiency in the general prognosis of valvular disease differed with different observers, and was extremely difficult to determine with exactitude. On this head Dr. Clark said: "For my own part, I think that to form a just estimate of the place of this malady in the scale of prognosis, it must be divided into two stages. In the first stage—that is, before failure of compensation has occurred—it is the least grave of valvular maladies; after failure of compensation, and reckoning suffering to be endured as well as peril to be incurred, it is perhaps the most grave. The only exceptions to this would be in cases of aortic constriction and regurgitation with anginal complication." Passing on to consider the conditions which justify a favourable prognosis, Dr. Clark thought we may venture to say that if, in a given case of mitral regurgitation, the family and personal history be moderately good, if the murmur be stationary, if the muscular power of the heart be unimpaired, if there be little or no secondary complications, and if the patient be willing to place and keep himself in favourable conditions, the health might be indefinitely kept up without material interference with ordinary duties and enjoyments of life. The requirements necessary for the maintenance of health were shortly these: A simple and not over abundant dietary, with sufficient intervals between meals taken at regularly recurring times; moderation in the use of red meats, abstinence from beer, cider, and other sour or sour-begetting drinks, the sparing use of any form of alcohol, which, if taken, should be taken only with meals; maintenance of the due action of the bowels; avoidance of violent exertion, of hurry and excitement, of getting chilled when heated, of causes which bring about the rheumatic state, of the excessive drinking of liquids, of the free use of acid fruits, if practised, of dwelling upon the actions and conditions of the heart; and, lastly, the cultivation of an orderly, occupied, cheerful, and tranquil life. Dr. Clark concluded by remarking that though these particulars might seem too trivial for serious enumeration in such a Society, yet when we remember that it is mainly through the long and continued influence of little things in our daily lives that disease is begotten or health maintained, we cannot think so, and that no physician can adequately discharge his duties to his patients who disregards them.—Dr. SEMPLE stated that in 1850 he had propounded the same views as the author of the paper. Referring to a case related in the paper of a gentleman aged eighty, he had often examined the case, and doubted whether any mitral disease existed.—Dr. THEODORE WILLIAMS agreed with Dr. Clark's conclusions; in his own experience, when mitral disease occurred between the ages of fifteen and eighteen, it tended less to become progressive than when it occurred after the age of forty years.—Dr. SYMES THOMPSON commended Dr. Clark's suggestion that a code of questions on the subject should be circulated among the general practitioners of the country, for as physicians were restricted nearly to hospital cases, which were usually fatal, their prognosis was liable to error. He did not think the second class of cases referred to by the author were so fatal as the latter stated—viz., those where there was enlarged liver, albuminuria, and a loud murmur. On more than one occasion he had known digitalis in large doses to relieve all the symptoms.—Dr. FOTHERGILL related several cases of mitral disease which had existed for many years, causing little or no symptoms. He would like to ask the author what was the prognosis in cases of combined tricuspid and mitral disease; and also whether he could explain why it was that mitral disease was more frequent among girls than boys.—Dr. BROADBENT said that he did not think the question before the Society was, How long people could live with mitral disease? It was clearly shown that they could live twenty, thirty, or forty years; but the question was how to distinguish between these cases. It was important to ascertain whether the disease was progressive or not; and, secondly, to ascertain the actual amount of regurgitation present. He thought this was best distinguished by the amount of dilatation and hypertrophy. Simple regurgitation alone was far less important than when combined with stenosis. Another element to consider was whether the regurgitation is consequent on disease of the valve or on the ventricle itself.—Dr. SANSOM stated the fact that endocarditis might exist for any period without producing symptoms. This he had clearly demonstrated to be the case, especially among children; and this being the case, he could not see how it was possible for us ever to arrive at an accurate prognosis.—The PRESIDENT pointed out that a great body of evidence had already been accumulated from the experience of practitioners generally throughout the kingdom; not, indeed, evidence as to the prognosis of particular lesions, nor yet of a sort that was available in the case of a particular patient; but, nevertheless, it was evidence of value as to the expectation of life in heart disease generally, and it went strongly to confirm the views propounded by Dr. Clark. It would be admitted that cases of heart disease were incomparably more active during the first thirty years of life, and a very large proportion of such disease dated back even to times of childhood and adolescence. But registration statistics showed that ages over fifty-five exhibited considerably more than half of the total mortality from heart disease; and this was the fact, although the actual number of people living at ages over fifty-five was of course far smaller than the number living at earlier ages. With this interval between the period of maximum production and the period of maximum fatality of heart disease, in all classes of the community, the inference appeared inevitable that the expectation of life was not so seriously diminished by the presence of heart disease as used at one time to be supposed.—Dr. ANDREW CLARK, in reply, said he was not aware that Dr. Semple had anticipated the facts he had related, and had arrived at the same conclusions as himself. However, the literature on this subject appeared to him very loose, especially as to prognosis, and as to the best means to be employed for prolonging life. He agreed with Dr. Williams that the age at which the disease first presented itself was a matter of great importance in prognosis. He had not found digitalis of such benefit in the second class of cases as Dr. Thompson had; and he referred to the better discrimination of cases in which we should give that drug being due largely to Dr. Fothergill's essay. He was not aware that mitral disease was more common among girls than among boys.

PROVINCIAL SOCIETIES.

MANCHESTER MEDICAL SOCIETY.—At the last meeting of this Society Mr. WALTER read the particulars of the case of a young man, aged twenty-three, who in a state of semi-intoxication was thrown off a cart, the wheel of which passed across his chest, causing laceration of the lung

without any wound or fracture of the thoracic walls taking place. The patient recovered, and was shown at the meeting. It was stated that, with the exception of two cases reported by Gosselin, of Paris, death has ensued in every other instance.—Mr. JONES showed a child upon whom he had performed the radical cure for double congenital inguinal hernia. The operation consisted in ligaturing the sac. On one side the sac had to be opened before reduction could be effected, but in the other this was not found necessary. The operation was conducted on strict antiseptic principles.—Dr. HUMPHREYS read notes of a case of Cerebro-spinal Meningitis. A boy aged seven years, from Salford, was admitted into the Pendlebury Hospital, April 19th, 1871. His illness had begun suddenly four days previously with vomiting, rapidly followed by intense headache, stupor, with constant moaning. On the sixth day of illness opisthotonos was well-marked. His belly was retracted, and all his limbs slightly rigid. There was much delirium. The passages were involuntary. On the seventh day of his illness he died. The opisthotonos was not so well-marked on that day as on the previous one. On post-mortem examination, there were found adhesions, with fibroid induration and pigmentation of lung-substance, at the right and left apices. The lungs were much engorged. No grey granulations were seen. The ileum presented several tracts of intense enteritis. On the brain and spinal cord were tracts of firm greenish-coloured exudation lying between the pia mater and arachnoid. The chief sites of the exudation were the following: the optic commissures and the fissure of Sylvius, some of the sulci of the hemispheres, various parts of the medulla, pons, and cerebellum, and the back part of the spinal cord in the dorsal and lumbar regions.—Mr. WHITEHEAD showed a man, aged fifty-six, from whose tongue he had removed an epithelioma involving the apex and left anterior third. The tumour was excised by scissors without any anæsthetic being given; and the only pain complained of was when two vessels were ligatured. Mr. Whitehead also showed a woman whose tongue he had entirely removed with scissors twelve days previously. He claimed for the operation all the advantages and none of the drawbacks of other operations.—Mr. BRADLEY read a paper on Antiseptic Surgery, giving a review of its present position, and describing methods by which its principles could be more simply carried out than was generally the case.

Reviews and Notices of Books.

On Hydatids of the Lung; their Diagnosis, Prognosis, and Treatment, &c. By S. DOUGAN BIRD, M.D., L.R.C.P., &c., Lecturer on Materia Medica and Therapeutics in the University of Melbourne, late Honorary Physician to the Alfred Hospital, &c. Second Edition. Melbourne: G. Robertson. London: J. and A. Churchill. 1877.

DR. BIRD'S work on hydatids of the lung has been known for some time as one of the best expositions of this somewhat rare disease, but it has been difficult to procure it in this country, owing, as the author tells us, to an unaccountable loss of the greater part of the first edition during its transmission to Europe. Although it cannot lay claim to so great elaborateness as the longer treatise of Dr. Hearn on "Kystes Hydatiques du Poumon et de la Plèvre," which we reviewed some three years ago, it is far more original, and may be strongly recommended as a concise account of what is known of the clinical aspects of the disease.

Hydatid cysts in the lung appear to occur far more frequently in the colony of Victoria than in this country, or any part of Europe. But although far rarer here, they are sufficiently common to make their correct diagnosis a matter of some importance, and we have no doubt that they are often overlooked where they actually exist. It is generally believed that the ova are introduced into the system by the same channels as when the liver is the organ affected, and that they pass either, as some believe, by migration directly from the liver into the lungs, or, as is more probable, by entry into the blood and conveyance into the pulmonary circulation. Seeing that hydatids may be found in any of the abdominal organs, in the heart and mediastinum, and in the brain, as well as occasionally in the tissues of the limbs, there would seem to be no special necessity for discovering a separate mode of ingress for hydatids of the lung. But Dr. Bird suggests that their frequent occurrence in Melbourne is due to the inhalation of dust from the streets, which are watered with unfiltered water from the Yan Yean river, into which a large quantity of droppings of sheep are supposed to enter. But, as he rightly suggests, a more rigorous investigation into the cause of the special proclivity to lung hydatids is required.

The most valuable sections of his work are those which relate to diagnosis and treatment. The general symptoms naturally vary greatly with the size and position of the cyst, and its condition as to inflammation or suppuration. In many cases the symptoms are few or absent, even where the cyst is of large size, unless there is pressure or irritation. Loss of flesh, phthisical cachexia, with Hippocratic fingertips, cough, and expectoration, may be present, even where the case is uncomplicated; but their persistence after evacuation of the cyst indicates tubercular complication. Hæmoptysis in large quantity is extremely rare, though it may occur from the pressure of large or old cysts. But the only means of accurate diagnosis are two: the physical signs before rupture of the cyst; and the expectoration of hooklets or hydatid membrane after rupture, or their evacuation by trocar. The physical signs before rupture of the cyst vary, of course, with the size and locality of the sac; but, according to Dr. Bird, when in the lung itself, there is a certain uniformity in the mode of growth which facilitates diagnosis. When small, the cyst may be near the centre of the lung, with no surrounding false membrane; but as it enlarges, it usually advances towards the chest-wall, compressing the superficial layer of lung-tissue. When it has reached the capacity of a pint or more of fluid, there is more or less deficient expansion of the lung on the affected side; mensuration is but little affected; there is absolute dulness on percussion over a limited circular area, with absence of vocal fremitus—this area of dulness not changing with change of position. Respiratory sounds are lost over the dull area, but recommence immediately beyond, and, though perhaps harsh and puerile, are vesicular. Fluctuation and vibration on percussion may in some cases be observed. When the cyst is much larger, there may be much more variation in the physical signs. After rupture and evacuation by a bronchus, the signs are of course those of a cavity.

Dr. Bird points out the difficulty of diagnosing a cyst high up and far back in the liver encroaching upon the thorax from one in the lower lobe of the right lung. Phthisis is often simulated by, and may be complicated with the sequel of hydatid, especially if the latter is allowed to remain without operative interference. Localised pleurisy, circumscribed abscess of the lung, mediastinal tumour or abscess, and solid tumours of the lung, may also be mistaken for hydatids; and, as a final means of diagnosis, Dr. Bird recommends puncture with a fine trocar.

The only treatment which Dr. Bird recommends, and on the necessity and safety of which he strongly insists, is that of immediate tapping with a fine trocar; and, in exceptional cases of old standing, where there is a thick adventitious wall external to the cyst, or in pleural cysts, he advises incision. The trocar should be six inches long, very fine—in fact, the smallest made; and the stylet sharp-pointed. He advises a small skin incision to save strain on the trocar. He condemns the aspirator as useless and not devoid of danger. Nor does he consider it necessary to leave a trocar

in, but resorts to bromide and iodide of potassium and kamela or turpentine given internally, to effect the complete cure. When spontaneous rupture of the cyst has occurred, he does not consider operative treatment desirable, unless constant discharge of blood or pus and cough are reducing the patient, when it must be treated as an abscess.

We must, however, leave further details of the methods of treatment, and many interesting cases in support of the views of the author, unnoticed. Dr. Bird's monograph will well repay perusal, and we cannot but congratulate him on so valuable a contribution to medical science on an obscure and ill-recognised disease.

On the Pathology of the Pneumogastric Nerve. By S. O. HABERSHON, M.D., F.R.C.P., Senior Physician to, and Lecturer on Medicine at, Guy's Hospital, &c. London: J. & A. Churchill. 1877.

DR. HABERSHON has presented to the profession in this small work the lectures which he delivered last year as Lumleian Lecturer to the Royal College of Physicians. He first refers to the anatomical distribution and physiological action of the nerve, and then passes on to the various conditions in which this nerve is implicated, laying especial stress on its importance in connexion with the great functions of circulation, respiration, and digestion. The anatomy of the nerve is given very concisely but fully, although no mention is made of the auricular branch and the branches to the spleen, which have been traced by many observers, and are noticed in all standard anatomical works. The account of the physiological action of the nerve does not seem to us as complete as even a brief summary should be, considering the precise character of the knowledge of the functions of this nerve which we now possess, as a result of numerous modern investigations. The physiological importance of the junction of the internal branch of the spinal accessory with the pneumogastric deserves more attention when room is found for an ingenious but very doubtful explanation of the *reason why* the superior laryngeal nerve supplies the crico-thyroid muscle. The pathology of the nerve is discussed under these three laws of action:—1. Disease at the origin of the nerve may induce symptoms in any of the peripheral branches, and this reflex state may be one of irritation and hyperæsthesia, or one of diminished power and anæsthesia; the one is spasmodic in character, the other paralytic. 2. Irritation in any set of peripheral muscles may produce disturbance in any other part to which the nerve is distributed, or in the centre itself. 3. Alternation of irritation may be induced, at first one set of nerves, then another, becoming implicated.

These laws are exemplified by various affections of the larynx, œsophagus, lungs, heart, and stomach, and some excellent cases in illustration of them are described. Dr. Habershon's remarks on the influence of the pneumogastric in the explanation of many of these conditions are very suggestive, although we fail to see the necessity for calling it to our aid in explaining some states which are easily explicable on other and more widely-accepted grounds. It is hardly putting it fairly to say that in whooping-cough the mechanical pressure on the delicate air-cells *may* have to do with the production of emphysema, for this is surely a sufficient cause without the addition of a problematical factor, such as the influence of the pneumogastric. We had hoped that such a complex subject would have been treated at greater length, and that Dr. Habershon would have been able to find time to expand these lectures into a standard treatise. He would then have been able to lay greater stress on the more important phenomena, instead of presenting us with a mere bird's-eye view of most of the diseases of the organs to which the nerve is distributed. A table, containing twenty-four different conditions in which the stomach is implicated through the pneumogastric nerve, duly arranged as central, local, and peripheral, reminds us more of the student's examination knowledge than of the matured experience of so good a clinical observer as the author. We still hope that in a future edition these symptoms and phenomena will be more fully discussed, and our literature enriched by a work to which we may point as being exhaustive on a subject of so great interest and importance.

EXCISION OF BRONCHOCELES.

To the Editor of THE LANCET.

SIR,—I have read with much interest the case of excision of a bronchocele, by Professor Spence, of Edinburgh, in a girl of thirteen—firstly, because cases of suffocative goitre are comparatively rare; secondly, because a difficult operation was evidently conducted with great skill and boldness; and, thirdly, because it is a question whether such operations ought ever to be undertaken. One can, however, only regret that the operation in question proved fatal, and that so speedily; though from the size of the tumour and its connexions, and the evident disturbance of the vascular and sympathetic functions, the girl was far from being in a promising condition for a serious operation.

The results of these excisions do not appear to be favourable, and a surgeon might well hesitate to recommend or to undertake an operation involving parts of such great vascularity and vital importance as those in connexion with a bronchocele. I would suggest that in cases of dyspnœa or dysphagia resulting from thyroid enlargement—which may be comparatively trifling in size—a more extended trial should be given to the use of the seton. I have several times seen cases of extreme dyspnœa relieved within a few hours of the introduction of a large seton of two or more threads. The rules for the introduction of a seton are—that it should be a very large one; that it should be introduced very far back, almost touching the sterno-mastoids, and very deeply, almost touching the thyroid cartilage or trachea; and that any large veins be pressed out of the way; the carotids can be fixed down behind the sterno-mastoids.

When suppuration is established, pull a larger seton through, and poultice freely; if the goitre is very large, injections of iodine may be made into its substance in various parts to assist in its resolution, but the seton is the sheet anchor, and after suppuration has commenced there is very little pain or distress.

I have had a man under my care whose life has been saved, certainly once, if not twice, by the seton, during the last eighteen months. On the first occasion he came to me suffering from intense paroxysms of dyspnœa, produced by a small, hard bronchocele clasping the trachea, and he stated that he had barely slept for a fortnight. After the introduction of a seton the dyspnœa entirely ceased. He retained the threads for a couple of months, when, as the goitre was much reduced and the breathing normal, I withdrew them. Some four months afterwards, he again presented himself at the hospital, terribly emaciated and feeble, stating that a fortnight previously the dyspnœa had returned, and that in addition he could literally swallow nothing, which was evident from his prostrate condition; he begged me to reintroduce the seton, or do something to relieve him. A very large seton was now passed, and the next morning he was able to eat a hearty breakfast. The seton was retained by his express wish for several months, and some difficulty has been experienced in reducing the exuberant granulations from the seton-holes. He states, however, that he would suffer anything rather than the suffocation and obstruction. The daughter of this patient is also under my care for a similar swelling—showing its hereditary nature—which has been nearly dispersed with a saturated iodine tincture.

I would again strongly urge the use of large setons, instead of the terrible alternative of excision, which, even if successful, can hardly be called a triumph of surgery.

I am, Sir, your obedient servant,

Weymouth-street, W. LLEWELYN THOMAS, M.D.

THE LANCET.

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ABOUT the commencement of the present century two important events conspired to give a fresh impetus to the practice of tying arteries. In the year 1785 HUNTER first performed his operation of ligature of an artery for the cure of aneurism; but, in consequence of the errors which at that time prevailed respecting the principles which should govern the application of ligatures, secondary hæmorrhage occurred so frequently in subsequent trials by other persons that the operation would perhaps have been abandoned but for the opportune appearance in the year 1805 of Dr. JONES's classical work on Hæmorrhage, which contained the record of a large number of careful experiments made on the lower animals to ascertain the effects of ligature on the arterial tunics. Dr. JONES showed that the cause which had chiefly militated against the success of the ligature as a hæmostatic and a means of curing aneurism had been the dread of damaging the walls of the arteries by applying the ligature too tightly, and proved that the permanent closure of a ligatured artery, and its ultimate repair, depend upon the complete circular laceration of the inner and middle coats, and the deposition and subsequent organisation of adhesive lymph upon the edges of the divided coats. Up to this time surgeons had used thick and broad threads, tapes, ribbons, reserve ligatures, cylinders of cork, wood, or linen, and other clumsy contrivances, with a view of stopping bleeding without inflicting injury upon the arterial tunics, and then recurrent and secondary hæmorrhage was remarkably frequent. All these were sooner or later superseded by the small, firm, round ligature which JONES had found to be best fitted to make a clean circular cut through the friable middle and inner tunics without wounding the tougher external coat. The first effect of the publication of JONES's views was a violent and extravagant reaction in favour of temporary ligatures. JONES had found that if three or four ligatures were applied around an artery in dogs and horses with sufficient force to divide the two inner tunics, and then immediately removed, the vessel became impervious in the course of a few hours by effusion of lymph, with or without the formation of blood-clots, even though blood flowed freely through the vessel when the ligatures were first removed. When only one ligature was applied in this way, the calibre of the artery was not completely obliterated. In order to obtain closure of the vessel under this condition, it was necessary to leave the thread on the vessel for a few hours. Mr. A. C. HUTCHINSON, TRAVERS, and others, thought that the temporary ligature might be used in the human subject; and in the year 1813 Mr. HUTCHINSON tied the femoral artery with a double slip-knot ligature for popliteal aneurism in a man, leaving a quarter of an inch between the two ligatures. No pulsation could be detected in the aneurism as long as the ligatures were in position; but when they were removed six hours afterwards, the vessel distended, and in less than a minute pulsation returned in the tumour. Two fresh ligatures were then applied, but secondary hæmorrhage supervened; amputation was performed, but the man died. Sir ASTLEY COOPER found pulsation re-established on the removal of a ligature that had firmly constricted an artery for thirty-two hours; and Mr. TRAVERS, who was one of the chief advocates of the temporary ligature, was obliged, in order to complete a cure, to tie the femoral artery a second time, and then in the usual manner, in a case in which he had removed the first ligature at the end of twenty-five hours. TRAVERS then ceased to recommend temporary ligature, and the practice was soon given up in this country. But just about the time that the advocates of the round ligature were giving way upon temporary ligature, SCARPA revived the practice on the continent with broad ligatures.

The use of temporary ligatures was gradually abandoned for another important modification in the application of the ligature, which was first practised about the year 1814. The ends of the ligature when left to hang from the wound became sources of irritation, and prevented union by first intention, and their liability to be pulled away with the dressings very greatly increased the risks of secondary hæmorrhage. It was therefore proposed to use a fine material, to cut both ends of the ligature close to the knot, and then to close the wound, leaving the tiny loop around the vessel to be softened and absorbed, or to make its way out as best it could. The practice of cutting off the ends of the ligature was recommended by LAWRENCE in England, and by DELPECH and BÉCLARD in France. LAWRENCE calculated that the loop of silk which he left in the artery did not weigh more than one-eightieth of a grain for the slenderest ligatures, and not more than one-twentieth of a grain for a ligature strong enough to secure a large artery, such as the iliac. But experience showed that even this small fragment was sufficient to act as an irritant to the tissues in which it lay, and was liable to set up inflammation followed by suppuration, and other ill consequences at any time, before or after the healing of the wound. The practice was therefore given up, or only employed in cases in which it was known that the wound would not heal by first intention.

While some surgeons were now content to apply a silk or hempen ligature, and to leave the ends hanging out of the wound, others did not relax efforts to discover some means whereby the artery could be effectually closed, without interfering with union of the wound by first intention. Experiments were instituted with ligatures made of animal substances capable of absorption or of organisation. PHYSICK, of Pennsylvania, recommended hard rolled pieces of chamois leather; JAMIESON, of Baltimore, strips of untanned buckskin; HARTSHORN pieces of parchment; Sir ASTLEY COOPER catgut; Professor EVE strips of tendon; MCSWEENY, of Cork, silkworm gut. But although sometimes eminently satisfactory, animal ligatures, and especially those made of catgut, could not be trusted because they occasionally softened and disintegrated before the artery was properly sealed; when the support of the ligature was withdrawn the ends of the vessel yielded to the pressure of the blood, the reparative material was washed away, and secondary hæmorrhage ensued. Metallic ligatures made of gold, silver, or platinum were first suggested by PHYSICK and LEVERET,

but never enjoyed much favour, and soon shared the fate of their predecessors. Thenceforth for many years surgeons preferred to put their trust in silk or hempen ligatures, allowing one or both ends to hang out of the wound.

The use of catgut ligatures has been lately revived, chiefly in consequence of the efforts made by Prof. LISTER and others to discover a mode of dressing wounds whereby suppuration may be prevented and repair by adhesive inflammation promoted. One of the essential conditions for the success of all attempts of this nature being to protect the wound as far as possible from all disturbing influences and to rid it of irritating particles, endeavours have been made to obtain some material for the ligature that will not act as a foreign body and set up inflammation when buried in the tissues. Catgut ligatures are, therefore, now largely employed in surgical practice. In order to obviate the objections which belong to the catgut ligature in its ordinary form, Prof. LISTER subjects the ligature to long immersion in oil and carbolic acid; and when treated in this way, it is said to be but slowly affected by moisture, and is consequently safer, being less liable to become prematurely softened. Many conflicting verdicts have been already delivered on the merits of the carbolised catgut ligature, but no statements have yet been published sufficient to justify a formal judgment. On the one hand, it is alleged that the ligature is perfectly safe, and that when it fails, it does so either from carelessness in applying it or from some fault in the preparation of the material; while on the other it is affirmed that secondary hæmorrhage is unusually frequent after the use of the carbolised catgut ligature, notwithstanding the exercise of the greatest care in applying it and the strictest attention to antiseptic precautions. The statistics for the Newcastle-on-Tyne Infirmary, published in THE LANCET on the 8th instant, and the cases which were brought before the Clinical Society on November 23rd, tell unfavourably against the carbolised catgut ligature. Whether a larger experience will be more favourable, time will show.

We have been led to prepare this *résumé* of the history of the doctrines which have from time to time been held respecting the use and action of the ligature, because there has been a tendency in some quarters to ignore the experience of the past and especially to neglect the important principles which Dr. JONES enunciated more than seventy years ago.

THE interesting and important discussion which has been carried on in our columns during the past few weeks relative to the use of alcohol in moderate quantity, which was started by Mr. BRUDENELL CARTER'S record of his personal experience, may with advantage be summed up, and certain lessons drawn from it. The question which was raised by Mr. CARTER'S clear and candid record of experience was the old and much-debated one—Is the use of alcohol in moderation injurious to health or deleterious to the system; or is it not, on the contrary, an essential condition of health to some persons or in some states of life? And he desired, what we all must concur in desiring, "to place the question of the dietetic use of alcohol on a sound basis of medical knowledge and experience," believing "that the customary statements of total abstainers are to a large extent inaccurate, and that their arguments are in a great degree fallacious."

The challenge thus thrown down by Mr. CARTER has been taken up by a number of gentlemen, the majority of whom are members of our own profession, and well qualified to give the results of their experience. But a glance at the whole course of the controversy shows that not only is there no great accordance between the results of their experience, but that their arguments for or against the use of alcohol vary in yet greater degree. The armoury of physiology, chemistry, and pathology has been ransacked; the condition of prehistoric, and therefore prealcoholic, man has been adverted to; the social, convivial, and moral aspects of drinking have been commented on;—and from these, reasons have been drawn to support or condemn the use of alcohol.

But if we inquire what gain of knowledge applicable to use has accrued, we are obliged to confess that the records of individual experience of benefit or injury resulting from one or other habit are of far greater value than all arguments. It is a misfortune that it should have been supposed that the question of the value of alcohol in moderate doses as an article of diet could be solved by an appeal to physiology and chemistry. Anyone who has carefully followed the history of physiological experiments on the action of alcohol on the economy must be painfully aware how many gaps there are which yet remain to be filled before we can use the results of these experiments in the guidance of habits. The appeal to physiology has, we fear, on both sides of the teetotal controversy, been a dishonest one, though doubtless unconsciously so. Either side has been too ready to seize upon any experiment in proof of its position, and even so it has usually been necessary to construct a fallacious argument upon the doubtful fact in order to bring it to bear on habit and practice. If any proof of this were needed, it might be found in the use which has been made of the statements as to alcohol as a food, or its effect upon temperature, or in inducing tissue degeneration. In former days the observations of PERCY, and the experiments of LALLEMAND, PERRIN, and DUROY were seized upon as a proof that alcohol underwent no change in the system, but was retained in certain regions, especially the liver and brain, where it tended to accumulate, and was finally eliminated unchanged. Upon this were built theories of brain-hardening and liver-induration which, though they still survive in the "colloid and pectous" views of some would-be physiologists, are incompatible with our present pathological knowledge. So, too, of the question whether alcohol is a food, another controversy started on the similar ground that if alcohol underwent no change it could not act as a food. Of this question we need only say that it is a matter of very minor importance in its bearings on the subject. The observations of ANSTIE, SCHULINUS, MAGNAN, and others, prove that both the accumulation and the non-combustion theories are incorrect. In the same way the effects of alcohol upon animal heat, as deduced from experiment, have been made use of as a warning against its employment by those who are exposed to cold. But it is forgotten that the lowering of temperature observed is always after doses which for the animals experimented on are far

out of proportion to the moderate quantity which may be taken with food, and that the very same experimenters have shown that a small quantity causes a slight rise of temperature. Nowadays, vascular "tone" and "tension" are in fashion, and it is by the effects of alcohol upon these that all the results are measured; and, as a recent popular author has put it, "Whatever good can come from alcohol, or whatever evil, is all included in the primary physiological and luxurious action of the agent upon the nervous supply of the circulation." It is thus that certain obvious and well-known physiological facts of one of the effects of alcohol are made to support the statement that "if it be really a luxury for the heart to be lifted up (*sic*) by alcohol; for the blood to course more swiftly through the brain; for the thoughts to flow more vehemently; for words to come more fluently; for emotions to rise ecstatically, and for life to rush on beyond the pace set by nature; then those who enjoy the luxury must enjoy it—with the consequences."

It cannot be too strongly asserted that our knowledge of the physiological action of alcohol upon the system—nay, we might almost say our knowledge of vital processes *in toto*—is yet in its infancy. We are only on the threshold of the inquiry, and until it is further advanced we cannot too cautiously avoid hasty deduction and hypothetical generalisation. The long experiment and painful observation which have been lavished upon the subject will doubtless bear fruit in future years, and it may be that the full knowledge which we yet lack will surprise us by its simplicity. But as yet the most valuable part of our knowledge is, and must be, based upon observation and experience in actual life; and even when physiology and chemistry shall have done their utmost, experience must be the final judge. Hence it is a favourable sign that those who, by intelligence and knowledge, are most fitted to judge of the effects of total abstinence upon themselves, should be turning their attention to the subject; and the medical profession will have earned a debt of gratitude unequalled by any of their former inquiries when they have decided whether, and in what quantities, alcohol is beneficial to life, and most conducive to the support of mental and physical work.

When we look at the practical side of the question we do not find all difficulties cease. We have, on the one hand, the clear and decided testimony of some eminent members of the profession to the benefit they have derived from total abstinence, and on the other the equally clear statements of benefit from moderate use of alcohol, and injury from its entire withdrawal. Arguing from the known to the unknown, we suspect that there is much in physical constitution and in mental and physical habits which may account for the difference of experience, and that this difference constitutes a ground for the use of alcohol in some cases. There are probably few physicians who have not had some or many cases under their observation of men of great culture and intellect, and of the highest moral and religious character, who have, in order to set an example to others, abstained entirely for months, or even years, continuing in the same course of life as before, and who have given way in health, lost their power of work, and, having tried all other means of restoration, have failed until they returned to the use of alcohol in moderate quantities. Such facts, and cases like that of Mr. BRUDENELL CARTER, cannot be got over by any process of argument or ratiocination.

What, then, are the evils threatened by moderate indulgence, and in what way may benefit be produced by alcohol? It is said that even when no actual immediate derangement of the system occurs, there is less work performed, the energies are overtaxed, and the organism gradually though imperceptibly deteriorates. Let it be borne in mind that we are not speaking of any excess, however slight. Alcohol, it is said, paralyses the capillaries, relaxes the vessels, and accelerates the action of the heart, the work of the heart being increased, but to no good purpose. Alcohol in excess causes degeneration of tissue, therefore alcohol in moderation, taken habitually, must, though imperceptibly, cause a slow decay of the organs. The fallacy of these arguments, viewed as arguments only, is apparent, for they proceed on the assumption that the body is only a machine, forgetting that it is a machine which is constantly renewing itself, and that, therefore, unless its vital power of renewal is impaired in proportion to tissue decay, it will retain its normal condition, or may even improve in nutrition. Such mechanical and chemical pathology loses sight of one of the most essential factors in animal life. So that unless it can be shown that there is always a permanent evil result after each dose of alcohol, however small, we may assume that no evil results from the prolonged moderate use. Our present knowledge of alcohol goes to show that there are two sets of evil effects which are permanent, and that these are related to diminished nutrition and to excessive stimulation. How far the molecular and fatty degeneration of highly organised tissues, such as muscle, nerve, and secreting cells, are due to overaction, has not yet been determined, but it is not improbable that a part at least is consequent upon deranged glycogenesis, due to frequent irregular stimulation of the liver, though, perhaps, more to direct action upon the tissues themselves. Excessive stimulation, again, appears to be the chief agent in the production of sclerotic changes, though how far this is aided by vaso-motor paralysis we are as yet uncertain. But in any way it is but the irregular ill-timed excitation of a natural function which leads to evil results, nor is there anything to show that the slight increment of the normal excitation, produced by the addition of a small quantity of alcohol to food, leaves any structural result behind. And so far as observation goes, it would tend to the belief that a very large quantity habitually taken *may* have no tangible result.

In what ways alcohol may aid and benefit the system may be briefly indicated. Probably the benefit varies with different people. In three ways, at least, it is of use to many. Primarily, and probably in most cases, in promoting digestion; though we are not inclined to dogmatise on the exact method, for which various theories have been suggested. Another action which we believe to be most valuable, though it is urged against its use, is the temporary suspension of the power of fixed attention and thought. There are some men who, whether from a jaded anxiety or from mere intellectual activity, have little or no power of control over their mental work, and, from want of intervals of rest from thought, are apt to overbear their brain power. In some cases food or

society is sufficient to cause a suspension of this constant strain; but in others a very moderate dose of alcohol with food alone gives the needed interregnum. In spite of what is urged against it, we are convinced that this is one of the most valuable actions of alcohol in modern life, and a great aid to conservation of energy. The third, the production of sleep, is perhaps but a sequel of the second. Given a good constitution and a good digestion, absence of mental overwork or strain, and plenty of air and exercise, there are few who would be benefited by alcohol. But how few there are in the life of London and other large towns who are in a condition which can be represented even by the balance of function which we call health.

But we would not be misunderstood as recommending even a moderate use of alcohol in all cases, far less any excess, however small. No one can doubt the enormous moral, physical, and mental deterioration which exists and is constantly being aggravated by excess in drink. Nor could anyone doubt the benefits of moderation or even of total abstinence in a large number of cases, especially where habits of excess, however slight, have prevailed. The drinking habits of young men in the present day are appalling, and threaten physical as well as moral deterioration of our race.

What, then, is to be understood by excess. Excess may be in quantity, quality, or time. Alcohol in any shape or form should never be taken except with meals, and, we believe, preferably at only one meal in the day. The habit of drinking in the forenoon is pernicious in the extreme, and in our opinion wine or beer is best avoided at luncheon. In quality there are two things to be considered, combination and dilution of the alcohol, and digestibility of the liquor. That natural light wines and light ales are best when they do not disturb digestion by their other ingredients than alcohol everyone will admit, and, where these disagree, recourse must be had to stronger liquor diluted. In the opinion of many foreign authorities much of the evil of drinking in England is due to the fiery and potent nature of our habitual drinks. As to quantity, it is far more difficult to lay down any rule, for that which may be taken with benefit by one person, or at one time, may injure at another. The quantity which is usually taken at a dinner party would, if taken habitually, be undoubted excess. For young and active men a glass of beer, or one or two glasses of claret, at dinner is, we believe, an ample supply; whilst men of middle age may with advantage "stop at the third glass" of claret, sherry, or port, and fear no ill-result. But beyond such general injunctions the infinite variety of constitution, habit, and digestion, would make any detailed prescription worthless. The ultimate test in every case must be experience, and until men have enough moral control and discretion to limit their drinking to that which they absolutely require, all direction and rebuke will be thrown away.

PROMINENT among the subjects which are likely to engage the attention of Parliament early next session is the Coroner's Court, with the laws relating to that remarkable institution, as notable for its survival as for the extraordinary state of confusion into which its practice has lapsed. The office of "crowner" arose out of the necessity which existed in times long past to place in every district of the country a personal representative of the Crown, who should be able to exercise an ever-present and never-failing vigilance on behalf of the life-interests of the subject and the property-rights of the central or regal authority. Looking to the history of this Court, it is difficult to say which of the two provinces of its jurisdiction has been the more esteemed and the more diligently cultivated. Certain it is that the duties of the coroner in the supervision of Crown claims were quite as anxiously discharged by the holders of this office, in old times, as those which more immediately concerned the lives of the King's loyal subjects. The present moment is propitious for a review of the whole position, constitution, and work of the Coroner's Court and office; because no one is satisfied with the existing state of matters, and public opinion is clamorous for reform. The danger, so far as any can be thought to threaten the consideration of this serious subject in Parliament, lies in the direction of too sweeping change. It is always easier to pull down than to reconstruct without destroying. This is why the most revolutionary proposals have generally found highest favour with the masses.

We do not think the office of coroner should be wholly eliminated from the judicial system. The well-being of the community, now as ever, requires the presence of special guardians of life in every district, and it is not desirable that the holder of this trust should be a professional prosecutor or police-officer. In a word, the scrutiny which is needful into "the cause of death" ought not to be conducted by a functionary imbued with a suspicion of crime. The medical question ought to stand first in the process of inquest, and what follows—arising out of the discovery that a particular death was non-natural, or occurred under suspicious circumstances—should be accomplished by an agency more fitted for the discharge of police duty than the scientific. The two functions are wholly distinct. It is upon the basis of this general view that we have always contended that the holder of the coroner's office ought to be a medical man. If the principle has sometimes seemed to fail in practice, that is because the proper function of the Coroner's Court has been supplemented by duties not only above its level, but beyond its reach.

It may be useful to throw together—briefly, and without any pretence of reasoning out the grounds of our conclusions—the suggestions for reform which experience and observation have accumulated. First, it should be made finally certain by legal definition that the sole duty of the coroner is to ascertain "the cause of death" in cases where no certificate is forthcoming from a registered medical practitioner. It would, we think, be better to leave cases in which *prima facie* suspicion exists as to the *bona fides* of a medical certificate to be dealt with directly under magisterial jurisdiction. In such instances there must be a *presumption* of criminal misconduct somewhere, and nothing will be gained by interpolating an "inquest" between the initial cause of doubt and its legal investigation by a competent authority. The peculiar province of the Coroner's Court should be to search, without prejudice, for the cause of death in cases of sudden and unexplained decease; and whenever there is apparent or presumptive ground for the intervention of the magisterial

authority, the coroner should *not* move. Supposing this to be clear, and defined by law, it would be desirable to place the coroner's office, as nearly as may be, on the footing of a purely medical tribunal charged with the scrutiny of a professional topic. "What was the cause of death?" must obviously be always a medical question; and the answer should be worked out on the lines of a scientific inquiry.

The assistance of a lay jury is an anomaly in the process of inquest. When the Court was instituted, the presence of twelve neighbours to witness the discharge of the "crowner's" functions did not imply "trial by jury," nor, as a matter of history, does it appear that the twelve did more than declare their satisfaction with the manner in which the Crown functionary discharged his duty. The practice of treating a coroner's jury as itself the tribunal has grown out of the original practice, but it is not part of it; and the development has not been without its disadvantages. Whether it may or may not be desirable to retain the jury, it is indispensable to good work that it should be distinctly understood the finding is the result of a medical scrutiny, and the twelve neighbours, if present as witnesses on behalf of the community, endorse the proceedings in place of playing the prominent part. It is indispensable that an inquiry of this grave character should be conducted in open Court, and we think it convenient that a suitable number of laymen should be charged with the duty of accompanying the coroner, and empowered to require an extension of the inquiry if it does not appear to be exhaustive; but the attempt to develop a formal "Court" and "jury" out of the coroner's office and proceedings has been most disastrous. It would be better to return to the old practice, a close study of which—in the light of the changes which have occurred in the constitution of society—will suggest how readily and serviceably the spirit and method of the original "quest" might be restored.

The "post-mortem question" would adjust itself if the reforms to which we have pointed were carried out. A medical inquiry as to "the cause of death" *exclusively* would imply the adoption of scientific processes, and the examination of a body would be performed when necessary for medical purposes, not otherwise. Moreover, it would be conducted—as such operations are conducted when undertaken for solely medical purposes—by competent persons. Medical practitioners do not make "needless post-mortems" for their own gratification. It is under the pressure of an obligation not properly defined mistakes occur. The matter would be safe in the hands of a medical tribunal, and it may be left to be so determined. If it be said medical coroners sometimes err in respect to this very point, we reply, the medical men who happen to be coroners in the present state of the law are not *medical coroners* in any just sense of the term; their duties are not those of experts; they are compelled by custom, if not by statute, to perform functions which are in fact a travesty of judicial procedure, and they are hampered by the collateral powers of a company of witnesses elevated to the nominal status of a "jury" without the constitution or authority of such a body as created by law. We shall have no misgivings as to the post-mortem question if the Inquest as a whole can be placed on a solid and satisfactory basis.

Medical evidence and professional witnesses would take their proper position in a court of inquiry instituted, or—taking into account the changes arising out of the altered social conditions—we may say *restored*, as suggested. When the work is wholly medical it will be performed in strict accord with the needs of a scientific procedure; while the testimony of experts will be weighed in a professional balance, and the differences traced to the true source—defect of knowledge, or failure in observation. There should be as little as possible of the purely legal element incorporated with the procedure of this court. Of course guarantees must be taken for truth-speaking; but the practice of allowing lawyers to examine witnesses before the coroner, thereby converting the inquest into a judicial function, ought to be discountenanced. All extension of the area of an inquiry beyond the limits of a search for the *cause of death* ought to be disallowed. A simple answer to the single question of medical fact should be brought up, and upon the basis of that finding the magistrate's court might proceed.

The outline of reform thus lightly sketched will suffice to indicate the reconstruction we conceive to be necessary. It involves the abandonment of many undesirable pretensions, but their surrender would enhance rather than diminish the dignity of the office. At the present moment, we fear, the office has scant dignity of any kind to boast. It is in a position which commands neither respect nor confidence. Its character is wholly undefined. Whether a Royal Commission might tend to throw fresh light on the matter is an open question; but whatever is done, we venture to think the office must be modified and restored, not abolished. The need for a permanent guardian of life in every district of the country is increased, instead of being diminished, by the intricacies and multiplied contingencies of civilised life. The aim must be to develop the essential attributes of the coroner's proper function, and to lop off the excrescences on his office and court, by which their service to the community is marred and their claim to confidence sacrificed or destroyed.

THE much-vexed question of the effects exercised upon the stream and bed of the Thames by the flow of sewage from the northern and southern outfalls of the Metropolitan System of Sewers at Barking and Crossness respectively has again cropped up. A report has just been issued by the Conservators of the River, prepared by Captain CALVER, R.N., F.R.S., containing the result of an investigation made in the summer and autumn of the present year, at their request, into the changes which have recently taken place in the bed of the river between Woolwich and Erith. Captain CALVER finds, as he thinks, abundant evidence of accumulation of adhesive sewage mud, existing in great beds, diminishing the water capacity of the channel, and liable to become an impediment to navigation. He also describes a condition of the stream within the oscillation of the tidal flow which will take, we imagine, the metropolis by surprise. "As matters stand," he writes, "the metropolitan sewage discharge has reproduced in mid-Thames, in an aggravated form, a nuisance which was felt unbearable in the upper portion of the river." Referring to the state of the river

within the metropolitan area, when the sewers there discharged their contents at low water, he borrows a remark from Sir J. BAZALGETTE, in which that gentleman says the sewage "was most injurious, because it was carried by the rising tide up the river to mix with each day's past supply, the progress of many days' accumulation towards the sea being almost imperceptible." Captain CALVER adds that "this exactly describes the existing state of things in mid-Thames, both as respects the accumulation of sewage, its daily oscillation, and its slow progress seaward; the only difference now is that the nuisance which was formerly brought down to London by the ebb, is now carried up to London by the flood." Captain CALVER then offers some observations on the probable effects of this state of things upon the populations occupying the banks of mid-Thames, infers that it is calculated to produce the most deleterious effects, and illustrates this inferred deleteriousness of "the putrefactive matter contained in the water of mid-Thames," by the asserted fact that whitebait, flounders, eels, shrimps, &c., have vanished from this part of the river, and that the Dutch eel vessels, if they would keep their cargoes alive until delivered at Billingsgate, must now anchor below Gravesend, and not as high as Erith, as they formerly used to do.

We hope that Captain CALVER's engineering and tidal observations will prove to be founded on better data than his observations on the health aspect of the question. Sir JOSEPH BAZALGETTE, we observe, has already taken up the gauntlet thrown down by Captain CALVER, and is prepared to fight on the issue as to engineering data. We do not profess to know anything on that aspect of the subject; we may properly offer an opinion on the appearance of the stream of mid-Thames and its banks, as compared with that of the river within the metropolitan area before the completion of the present system of sewerage. Certainly, although sufficiently familiar with mid-Thames, we have never noticed a condition of the river there at all comparable to its condition during the pre-main-sewerage period in the Pool and above-bridge, except, indeed, at certain stages of the actual flow of sewage from the Crossness and Barking outfalls and opposite to them. Again, what evidence has Capt. CALVER that the disappearance of certain fish and of eels in mid-Thames is dependent upon the "putrefactive matter" contained in the stream. Does it not rather depend upon the chemical refuse which is poured into the stream along with the sewage? Dutch eels, at least, it may be assumed, would not be very delicate as to the excremental or putrefactive ingredients of the sewage. But the vague suggestion as to the deleteriousness of mid-Thames, by reason of its sewage-contamination, to the population on the banks surely ought to have been supported by some definite data. Now in this very mid-Thames are anchored several large schoolships, some of them having lain there before the Barking and Crossness sewage outfalls were opened. What light is thrown upon the question by the health-history of these ships? Captain CALVER does not even refer to this important source of information as to this part of his subject. We must protest against so perfunctory a mode of dealing with a grave matter of this sort. We would gladly see the sewage outfalls removed to a position where even a suspicion of nuisance or injury to communities might not arise; but the arguments which led to the outfalls being placed where they are were not lightly considered, and the question of their removal elsewhere is too serious a one to be lightly entertained. Certainly from the health aspect Captain CALVER has not shown reasonable ground for its being raised at present.

Annotations.

"Ne quid nimis."

THE SENATE AND CONVOCATION OF THE UNIVERSITY OF LONDON.

WE called attention last week to the reception which the vote of thanks of the Annual Committee to the Senate of the University of London met with, and quoted the Senate's reply in full. We pointed out that in this reply the Senate had assumed that Convocation was committed to the acceptance of the supplemental charter, and even that the chairman of Convocation had expressed its willingness to do so. Our doubts as to the justice of these assumptions have proved not to be groundless. At the meeting of the Senate on Wednesday Dr. Storrar, the chairman of Convocation, who, everybody knows, has been most scrupulous in the exact performance of his serious duties, called the attention of the Senate to the strange wording of its reply, and pointed out that he had not, directly or indirectly, expressed himself in the terms alleged. It is only fair to Dr. Storrar and to the deputation to make this statement, for those at a distance and ignorant of all that is passing might conclude that they had exceeded their duties. It is fair also to the Senate to say that it saw its mistake and has amended its reply. We need not give the terms of this: it is enough to say that the Senate now thanks the Annual Committee for its "courteous expression," and "trusts that the objects desired in common by the Senate and by Convocation may be obtained in a manner to which neither party objects." The Senate, however, reiterates its statement that it has not pledged itself to any future course of action. In a few days the supplemental charter will be in the hands of all the members of Convocation. It touches only on the admission of women to all degrees, but excludes them from Convocation, their entrance into which is to depend on the consent of that body. This excluding clause is evidence of the incongruity of the whole attempt to encourage women in a course for which even their advocates think them unsuited. Surely if women are fit to administer to minds and bodies diseased, to have charge of the material affairs of the English public, and the rest of it, they are fit to sit in Convocation or even in the Senate. It is impossible to foresee what amendments may be submitted when the charter is under consideration in Convocation. The Senate must feel that the Lower House has not received an answer in plain terms to its request with reference to the Russell-Gurney Act, and that naturally it will show signs of irritation on account of this; it must be by this time aware that the different sections in Convocation will regard from different points of view the admission of women to degrees. If the Senators remember what has occurred in their own body they can scarcely be forgetful of the difficulties with which the question will be surrounded in Convocation. We sincerely trust that the women's party in the Senate now understand that the vital changes which they proposed under the Russell-Gurney Act must be sanctioned by a far more serious consideration than this Act received before they can be made without detriment to the University and the public.

"CHEMISTS OR DOCTORS?"

OUR contemporary, the *Globe*, publishes a correspondence between those who differ as to the boundary line between the work of doctors and chemists. This correspondence shows that there are some chemists anxious to have a sort of legal recognition as quasi-medical practitioners, or, at least, a relaxation of the wise laws which distinguish between the rights of men who are educated to compound and dispense drugs and those who are further educated to understand disease. Those ambitious pharmaceutists are not likely to have their wishes gratified. There never was a time when the public, and the Legislature representing the public, had a graver interest in upholding the distinction in question. The bodies appointed by the Legislature to control the education of chemists and doctors are pushing the special education as far as they can. The medical examining bodies are rejecting, at the principal examinations, nearly as many as they pass. They are doing this for the purpose of ensuring that the doctors who are to advise the public shall be worthy of their grave function. Is it conceivable that the Legislature will, with one hand, empower certain bodies to make the most stringent examinations of medical men, and, with the other, empower chemists with no medical education to act as doctors? Those who think so must believe the Legislature capable of acting at once inconsistently and unjustly. We will not dwell on the injustice to medical men of exacting high attainments in special knowledge from them as a condition of legal recognition as practitioners, and then virtually allowing persons who have no pretensions to such knowledge to practise medicine. The interests of the public alone justify the severity with which medical men are examined. These same interests require the severest discouragement of all false pretensions to medical knowledge, whether by chemists or others. We have the high authority of Dr. Farr for saying that a large number of persons even now die without any proper medical advice. They have the advice of chemists—for there are, unfortunately, chemists who go on advising till death is imminent. If the infantile mortality which is such a discredit to our civilisation is to be reduced, the law against doctoring by chemists must be made more stringent, instead of less. We write thus in no spirit of disparagement to pharmacists. We heartily recognise the immense improvement in pharmacy, and the intelligent spirit in which it is practised by many chemists. But this is no reason for regarding them as in any sense doctors. They have enough still to do in bringing well-prepared medicines within the reach of the common people, instead of their being, as at present, the luxury of the rich, unless supplied by medical men or at charitable institutions.

THE ACTION OF HYDROCYANIC ACID ON THE BLOOD.

DRS. A. HILLER and WAGNER have recently undertaken an extensive series of researches on the action of hydrocyanic acid on the blood. They first examined the spectroscopic behaviour of the blood of the poisoned animal; secondly, analysed the gases of the blood; and thirdly, determined the amount of nitrogen excreted by the kidneys when frequently repeated doses were administered. The earlier spectroscopic researches of the blood in cyanic-acid poisoning, by Gaehtgens, Preyer, and others, seemed to show that the blood spectrum was not materially altered. Hiller and Wagner, however, examined the blood not only on withdrawal, but in the vessels themselves of the mesentery. The conclusions at which they have arrived are—First, that the position and intensity of the absorption bands of the oxyhæmoglobin actually circulating in the vessels are precisely the same as in the blood after its withdrawal, providing the thickness of the layer is the same. Secondly, that portion of the spectrum lying between C and E cannot be investigated because sufficient compression could not be exerted on the vessels (without disturbing the circulation) to obtain a layer of sufficient transparency. Thirdly, poisoning with hydrocyanic acid only rendered the absorption of the two oxyhæmoglobin bands feebler—that is to say, made the blood more transparent for these rays. Fourthly, the two oxyhæmoglobin bands remain visible for at least twenty-four hours in blood abstracted from the dead body of the animal. The oxyhæmoglobin, therefore, does not disappear from the blood in consequence of hydrocyanic poisoning. It follows that death is not referable to any abstraction or driving out of oxygen, as occurs in carbonic-oxide poisoning; there can be no doubt, however, that the interchange of oxygen between the blood and the tissues is interfered with, and as the introduction of fresh oxygen into the blood is lessened, the whole series of oxydising processes are diminished, or altogether arrested. This is supported by the fact made out by Gaehtgens that not only the absorption of oxygen, but the elimination of CO_2, is diminished in hydrocyanic acid poisoning.

THE DENTISTS AND THE COLLEGE OF SURGEONS.

THE Council of the Royal College of Surgeons have plunged deeper and deeper into error each time they have taken action in respect to the Dental licence. We have never attempted to conceal our sympathy with the aims and objects of the Association of Surgeons practising Dentistry, and we will not therefore hesitate to protest emphatically against the approval which the Council gave at their last meeting to a Bill for placing *all* persons practising as dentists on a Register, irrespective of any qualification whatever, except that of having been engaged for a certain time in such practice. The Council has not only exceeded its functions, but exerted a damaging influence on the attempts that are being made to raise the professional status of dental surgeons, properly so-called. We have again and again pointed out that the College of Surgeons has nothing whatever to do with dentistry except in so far as it is a department of surgery, and this opinion will, we venture to believe, commend itself sooner or later to all thoughtful people. The question of registering persons calling themselves dentists concerns the Council of the Royal College of Surgeons no more than any of the City Guilds. Surgeons are not disqualified for admission to the Medical Register because they practise dentistry; conversely, the privilege of official registration should not be accorded to individuals merely because they may seek to earn a livelihood by extracting teeth. Many of those who call themselves dentists are notorious quacks, and such as these the Council of the College of Surgeons are willing to place on the same list with their licentiates. If such a register as the Council has been asked to approve were ever issued, it would be a register of surgeon-dentists *minus* the surgeon.

ALLEGED DEATHS FROM VACCINATION.

THREE deaths of infants have recently occurred in Sheffield from erysipelas following upon vaccination. In each case the operation was performed by an unqualified assistant, who was in charge of a "Provident Dispensary," so-named, one of four dispensaries, the private establishments of a medical man, resident in Sheffield. The assistant appeared to conduct the work of the dispensary, his principal visiting it four or five times a week. Inquests were held on the several fatal cases, but the evidence with

respect to the mode of performance of the operation, as reported, fails so much in precision that a definite opinion cannot well be expressed as to the cause of the erysipelas. One of the medical witnesses is represented as saying that the occurrence of erysipelas after vaccination is proof of the impurity of the lymph used—a curiously inaccurate statement, if it were actually made. The coroner, in summing up in two of the cases, laid much stress on the operator being an unqualified man, observing that, "being unqualified, the law assumed that he performed the operation improperly, and that, therefore, he was guilty of manslaughter." The jury returned a verdict in accordance with this direction, and the operator was committed for trial on the coroner's warrant. In the third case the jury returned a verdict that death had resulted from erysipelas and bronchitis, the coroner remarking that this was a very unsatisfactory termination of the case.

CHRISTMAS FESTIVITIES.

THE season is approaching, as we write almost here, when it is the practice to give unbridled rein to the appetite and leave the faculty of digestion to take care of itself. The crop of consequences will come to the surface early in the new year, and Paterfamilias must first endure the anxious sorrow of seeing his offspring suffering the pains of repletion, and then pay the penalty of mismanagement and want of proper domestic discipline in the shape of doctor's fees and druggist's bills. If the mischief stopped here it would be well, but there is too much reason to fear that some of the worst of infantile maladies take their rise in the youthful excesses of the jubilant season of roast beef and plum-pudding. There are worse elements of the conventional fare than the pudding, though that is bad enough. It is, perhaps, to the wholesale overloading of little stomachs the worst ills are to be traced. The wondrous admixture of indigestibles accumulated in the gastric organs of delicate children at this season is a marvel to the age. As "Christmas comes but once a year," so people, at other seasons models of prudence, take off all restrictions and let young folk do pretty much as they like, which, in most instances, means very wrong indeed, in a fashion which those around them have often dire cause to lament. It is probably little use to urge the need of more than common caution at this season, when all without is chill and all within is weak; nevertheless, it may be worth while to warn parents and guardians that if there is any one part of the year at which it is especially needful to exercise the utmost caution in feeding the young, it is that we are now entering upon. Temperature and climatic conditions are peculiarly inauspicious for experiments on the physical economy of childhood, and the gravest perils attend the risk.

MORTALITY FROM INFANTILE ZYMOTIC DISEASES.

WHILE unanimity cannot yet be said to prevail as to the appropriate use of the word "preventable" with reference to the prevalence of scarlet fever, measles, whooping-cough, and other zymotic diseases to which children are principally liable, there can be no dispute as to the preventability of a large proportion of the mortality which is due to these diseases, especially in our large towns. Dr. Goldie, in a recent report upon the sanitary condition of Leeds during the five weeks ending 1st inst., calls attention to the ignorance of the working classes as to the nature and danger of these diseases as one of the main causes of the mortality due to them. It appears that during the five weeks under notice sixteen of the deaths in Leeds were uncertified as to their cause, and Dr. Goldie states that he usually finds uncertified deaths to be more numerous when measles and whooping-cough are prevalent, because there is a popular impression among the poor that these diseases require no skilled medical advice. Under proper treatment neither measles nor whooping-cough should prove fatal, except in a small proportion of cases, and yet nearly 20,000 children succumb to these two diseases every year in England and Wales. Most of these deaths, and doubtless others which are incorrectly returned, are directly due to pneumonia and bronchitis, so frequently the sequelæ of measles and whooping-cough. How far these results are due to ignorance of the danger arising from want of due care of children convalescent from measles, scarlet fever, and whooping-cough, and how far to the actual inability of the poor in our large towns to observe such necessary care, it is not easy to decide. Dr. Goldie, however, expresses an opinion that the present neglect, to which much of the loss of life from measles and whooping-cough is now due, would in a great measure disappear if coroners would hold more inquests in fatal cases where no medical attendance has been provided.

MEDICAL OR SURGICAL?

IN a County Court case, Wainwright *v.* Shaw, Barnsley, the plaintiff made a claim for £11 odd for services rendered. The plaintiff's qualification is the membership of the Royal College of Surgeons. The defence consisted in an attempt to show that the plaintiff could not recover for medicines. To this it was replied that the case was purely surgical, and the medicine supplied was simply auxiliary to the surgical treatment. The judge thereupon professed embarrassment in having to decide what was a surgical and what was a medical case. The defendant's attorney was ready with a witness, whom he described as "a physician, surgeon, and apothecary;" but whom the plaintiff described as "an enemy" of his. The difficulty was got over by referring the case to an arbitrator, before whom the case would have to be fully examined. We like to see judges do their own work; and there should be no difficulty in distinguishing practically between a surgical and a medical case. Let us hope that the days of single diplomas are nearly over, and that the examining bodies will not be able much longer to deal in one-sided qualifications.

PRE-CHRISTIAN DISPENSARIES AND HOSPITALS.

THE current (October) number of the *Westminster Review* contains a most interesting and learned article on the above subject, which, we are informed, is from the pen of a clergyman. The writer points out that many authors—including Canon Farrar—have committed the error of contending that hospitals are purely Christian establishments, and that before the dawn of Christianity they were unknown. How entirely opposite this assertion is to the real facts of the case is proved by numerous references to Greek, Roman, and Oriental writers. It is not known for a certainty that the Egyptians had any institutions analogous to our hospitals, but it is a well-established fact that medicine flourished in Egypt, that there were practitioners who devoted themselves to specialties, such as oculists and dentists, and that there were public medical officers whose duty it was to look after the poor. In Greece, also, at the time of Plato, there were physicians in the chief cities who devoted themselves to the public service, and received fixed salaries. It was in India, and in the city of Patria probably, that the first hospitals, properly so called, were established. This occurred in the reign of the pious Buddhist monarch Asoka, who flourished some three centuries before the Christian era. Asoka established hospitals

both for men and beasts, and the accounts which have come to us of these establishments point to their being, in all respects, similar to our own.

There is little, if any, trustworthy evidence of hospitals among the Jews or the Romans until the fourth century of the Christian era, when Fabiola, a wealthy Roman lady, built a large hospital outside the city of Rome, and St. Basil established an asylum for the sick in the city of Cæsarea. There can be no doubt that the sick were better cared for after than before the Christian era, but Christians have clearly no right to be considered as the originators of hospitals.

THE EFFECT OF ALKALIES.

WHAT is the effect of large doses of alkalies on the economy? Can they produce a cachectic state? Mialhe, of Paris, has lately given a negative answer to the question, and concluded his observations on the subject with some instructive remarks on the influence of alkalies. He believes that the effect of bicarbonate of soda is to modify the intimate composition of albuminous bodies with which the alkali enters into combination, and, in consequence, to increase the activity of the phenomena of oxidation, or of vital action, such as endosmosis and exosmosis, and to modify the excretions. To attain this result the quantity of alkali needed in different cases varies. The proportion of soda in the system, whether as carbonate or as albuminate, is not always the same. A man who lives in a town, and eats much nitrogenous food, needs a larger dose of alkali, in order to bring the system into the same condition, than the peasant who eats chiefly bread and vegetables. A loss of acid probably occurs during free perspiration, and hence the condition of the skin should be taken into consideration, for a person who perspires much needs less alkali than one who does not. The greater the amount of exercise the smaller is the amount of soda needed. Lastly, the higher the temperature the less alkali can be borne, perhaps because the temperature itself has an influence similar to that of forced exercise, and partly on account of its action on the nervous system. It is well to commence the treatment with the full quantity, which will be needed in divided doses. M. Gubler subsequently announced his concurrence with M. Mialhe in the need for and utility of large doses of alkali, but differed as to the possibility of doing harm by extreme doses. It must not, he urged, be supposed that because a substance is a necessary constituent of the body it cannot be prejudicial if given in large quantities. Oxygen, for instance, introduced into the lungs in too large quantities is a poison, and, although in some cases a quarter of a pound of bicarbonate of soda may be taken daily without inconvenience, it is certain that a distinct alkaline cachexia is sometimes to be observed, and is especially likely to occur where there is renal disease.

TEARS IN MADNESS.

THE *Daily Telegraph*, in a leading article suggested by a paragraph in a medical journal drawing attention to the "curious fact" that the insane do not weep, has hit on the true explanation of this misunderstood rather than curious phenomenon. The insane do not commonly shed tears in a paroxysm of grief because they feel too intensely for superficial and transient emotion. It is not in the most agonising phases of mental suffering that people weep. When sorrow works powerfully on the emotional side of man's nature it is either of low intensity or has begun to abate; though possibly destined to continue, it does not produce the highest form of excitement, but rather deep and harrowing pain. The emotional part of the system lies, so to say, outside the region of the more persistent sensibilities; the inner zone of feeling is the more retentive of painful impressions. As our lay contemporary acutely remarks, the victims of crushing woe do not exhibit the symptoms of surface sorrow, but are, as it were, struck dumb with the immensity of their affliction, and stand appalled and overwhelmed, rather than express their grief in the conventional forms of lamentation. It is because the insane are the subjects of an overpowering and oppressive sense of misery, an agony of feeling, they do not weep. When this is not the true explanation of their "tearlessness," that phenomenon is due to the absence of a normal interest in the misfortunes they bewail. This lack of sensibility, co-existing with an apparent sense of suffering, is incomparably more curious than the absence of tears.

THE Seventh Annual Central Conference of Representatives of Poor-law Guardians was held last week in the Rooms of the Social Science Association, Adam-street, Adelphi, under the presidency of the Earl of Lichfield. The president, in the course of his address, expressed an opinion strongly adverse to out-door relief; and the first paper read, that on "Out-door Relief," by Mr. G. W. Hastings, took the same view of the question; the author contending that by the repression of the system no less than one million sterling would be saved to the country. The Rev. F. W. Fowle then read a paper on "The Duties of Guardians in regard to Education," the subject matter of which does not specially interest the medical profession; and soon after the proceedings were brought to a close.

THE registered deaths in London last week numbered 1613, representing a mortality-rate of 23·8. Small-pox still shows a tendency to advance, the deaths due to it rising to 31, against 25 in the previous week. Measles also exhibited increased fatality, the number of deaths from the disease being 92, and 40 above the corrected weekly average. To scarlet fever 54 deaths were attributed, to diphtheria 10, to whooping-cough 25, to different forms of fever 26, and to diarrhœa 10. Under the head of diseases of the respiratory organs 415 deaths were registered, being 81 below the corrected average. Different forms of violence were fatal in 55 instances.

AGGRAVATED outbreaks of ophthalmia are reported from some of the pauper schools under the control of Boards of Guardians. At the establishment of the Holborn Board 500 boys have been examined by Mr. Bader, the ophthalmic surgeon, and all are declared to be more or less affected with the disease. A limited number of the children are to be taken to Guy's Hospital for treatment, while the remainder are to receive greater care and attention than appear to have been hitherto bestowed on them. At the St. Pancras Workhouse and Schools ophthalmia has also broken out, the disease being apparently of a severe type.

FIVE cases of typhus fever have occurred in the County Gaol at Salop during the present year. At the inquest on the body of a prisoner who died of the disease last week, the jury expressed a wish that the magistrates would order an inquiry to be made into the water-supply of the prison. A thorough inquiry into the general sanitary condition of the establishment seems desirable.

DR. SAMUEL LEVENSTON, whose name was erased from the Register in consequence of a letter to him from the General Medical Council receiving no reply within six months, has obtained from the Court of Queen's Bench a rule for a *mandamus*, calling upon the Council either to restore his name to the Register or to permit him to be entered *de novo*.

ON the 30th May next, and the two succeeding days, the Sanitary Institute will hold a public meeting for the discussion of the following subjects:—(1) The pollution of rivers, and the Acts passed in 1876 for the prevention of the same; (2) on the principle of water-supply, with special reference to improved water-supply for London.

THE inauguration of the statue of Dr. Graves took place on Wednesday, the 19th inst., at the College of Physicians in Kildare-street, Dublin, in the presence of a large and influential assemblage. All the learned professions were represented—the medical, as might naturally be expected, being present in large numbers.

SCARLET FEVER, measles, and typhoid fever are stated to be unusually prevalent in the parish of Marylebone just now. Diseases of the zymotic class also threaten other parts of the metropolis, a recurrence of the small-pox epidemic being especially feared in the East-end.

PROFESSOR CARLO GHINOZZI, the most distinguished physician in Florence and the highly effective occupant of the Clinical Chair of the Institute, died on Saturday, the 15th inst., after a long and painful illness. His funeral will be a public one.

THE Royal Academy of Medicine in Rome has decided to open to competition for 1878 a prize of the value of 1000 lire (£40). The Academy will shortly name the subject (probably Public Hygiene), and the conditions under which the competitors will come forward.

ANOTHER step in relative rank will, according to the *Army and Navy Gazette*, be shortly given to senior medical officers of the Royal Navy. "Better late than never" will be the reflection of members of that department.

THE Lords of the Privy Council have declared chloral hydrate and its preparations to be poisons within the meaning of the Pharmacy Act, 1868.

DR. BURDON SANDERSON'S LECTURES ON THE INFECTIVE PROCESSES OF DISEASE.

LECTURES I AND II.

IT is necessary at the outset to have a clear understanding of the meaning of the terms we use, and especially when these terms have been employed for more than one purpose. I have chosen the word "infective" to characterise those diseases which result from the introduction into the system of a poison or poisons. This poison or "seed" may be introduced from without or may originate in some diseased part of the body itself. Probably all of us believe that no contagious disease can originate *de novo*. About some infections there is no doubt—e. g., variola; but about others there is room for some difference of opinion—e. g., suppuration. But I cannot but think that Nature, if left to herself, will at once enter upon the process of repair. Believing this, we must regard a wound as a "mushroom-bed," in which infective processes easily take root, and we may hope, by a study of these processes, to prevent or control them. Infective diseases must be looked upon as preventable. I have already pointed out, in a paper read before the Medico-Chirurgical Society in 1873, that the development of infective matter depends upon the condition of the surroundings of a wound; and that an inflammation that is limited to the tissue affected by an injury is non-infective, while a more widely spread inflammation is infective. In 1873 I said that I thought that microzymes were necessary to infective processes, and as a recent statement of mine has been misunderstood, I must explain that this view does not mean that contagion is brought ready-made into a wound by germs.

The first infective process to which I will direct your attention is septicæmia. I take this because it is best known clinically, and especially because it can be so well studied experimentally. By septicæmia I mean the aggregate of the effects which are produced in the animal organism when putrid matter is mixed with the blood-stream. When a fatal dose of a perfectly clear septic fluid is introduced into the blood of a dog, the first thing observed is a shuddering, then restlessness, great diminution of muscular power, failure of respiration and pulse—the latter becoming very rapid—and then vomiting, violent tenesmus, with passage of feculent and afterwards muco-sanguineous dejecta. These symptoms are so constant as to be characteristic. If the quantity of fluid employed be just a little below the fatal dose, the most violent gastro-enteritic symptoms pass off, and the animal very rapidly recovers. This proves that the poison has no power to multiply in the organism, and, together with the rapid fall of temperature below the normal in all fatal cases, points to failure of the muscular power of the heart as the cause of death, and not alvine disturbance. The post-mortem appearances are—extravasations of blood under the endocardium, especially in the left ventricle; ecchymoses on the pleura and pericardium; intense injection of the mucous membrane of the stomach and small intestine, with stripping off of the epithelium; and congestion of the spleen and other abdominal organs. These changes indicate a tendency to congestion and capillary hæmorrhage, and an intense localised congestion of the gastro-intestinal mucous membrane. This tendency is the expression of a change which the blood itself has undergone; this fluid is darker in colour, its corpuscles are rounded rather than disc-shaped, and collect in clumps, and not in rolls, and many of them are in a state of partial solution in the liquor sanguinis. We can have no difficulty in deciding that these phenomena are the *direct consequence* of the action of the poison on the blood and tissues. Although these symptoms are characteristic of the action of septic matter, other substances, and particularly fresh pus, when introduced into the circulation, may exhibit similar actions.

In passing to the consideration of clinical septicæmia it is necessary, on account of the confusion as to the clinical meaning of the term, to state that what is meant is a disease of the blood, not of any particular organ or texture. I exclude from my definition all characters which relate to the development of metastatic abscesses or secondary foci of inflammation. Not that I question the very close relation between the causes of septicæmia and pyæmia, but it is both possible and desirable to distinguish them, for while the effects of a single dose of septic poison may be transient, the first steps in the development of pyæmia are almost invariably followed by the subsequent ones. Septic matter is very rarely introduced into the body from the outside in sufficient quantity to produce its characteristic symptoms; as a rule the poison which passes into the blood has been elaborated within the organism—e. g., in a wound which has been contaminated from outside. Thus clinical and experimental septicæmia differ in their mode of origin. The symptoms are difficult to observe; they are insidious in their onset, thus contrasting with the signs of pyæmia. We have initial pyrexia subsiding, in fatal cases, into collapse; while nausea, vomiting, and diarrhœa are seldom wanting, though never attaining such intensity as in the carnivora. Post mortem we find the same tendency to capillary congestion and stasis of the alimentary mucous membranes, and serous membranes of the heart and lungs, and the same conspicuous absence of inflammatory change as I have already described as met with in the dog. Cases more exactly comparable with experimental septicæmia are seen in obstetric practice, where failure of the circulation, dyspnœa from muscular adynamia, and collapse, ending in death, come on as early as twenty-four hours after delivery. There are no signs of inflammation of the uterus or the surrounding structures, but merely the changes already described. These are instances of blood-poisoning as free from the element of purulent infection as if the patient had a dose of some virulent liquid infused into her veins. Septicæmia, being a constitutional disorder of limited duration, produced by the entrance into the blood-stream of a certain quantity of

septic material, is a complication rather than a disease, having no necessary connexion with any local process, and no development; and, the poison producing it having no tendency to multiply in the organism, there is no reason why the morbid process should not come to an end of itself, unless the original dose is fatal, or a second infection takes place.

We will now consider the question, "What is it in septic liquids which renders them virulent, and how can we characterise their virulence?" Here is a perfectly transparent liquid strongly charged with septic poison, prepared by treating putrilage with boiling alcohol, filtering and evaporating, and extracting the residue with water. With reference to this I have to prove to you that it contains neither bacteria nor their germs, but that we have the strongest reason for believing that the virus itself cannot be produced without the agency of bacteria. The microscope does not enable me to say that any fluid is germ-free, for germs—bodies which when sown produce an organism—lie so completely beyond the powers of our present instruments that their existence is for the present matter of inference, not of observation. The only test is a physiological one. I can add a drop of any fluid to be examined to Pasteur's cultivating solution, if it is germ-free the fluid will remain clear, but if not it will become opalescent from the growth of organisms. Tested in this manner, this septic fluid is found to be sterile, and there can be no doubt that living germs are not concerned in its toxical action. The earlier experiments on septic infection were made with putrilage, and so it was supposed that the septic poison was some product of the putrefactive disintegration of albuminous compounds. But Bergmann has produced the poison without the presence of any albuminous compound. He grew bacteria in a cultivating liquid containing only sugar, ammonia tartrate, and inorganic salts, and found that whilst the first crops were inert, he eventually obtained a particulate liquid possessing all the virulence of albuminous putrilage. In any cultivation of bacteria in a nutrient solution the first crop is always inert, and the poisonous properties are developed later. This may be because time is required for the development of the poison, but, more likely, because the mode of vegetation changes. There is a marked difference in the outward form of the first and subsequent growths of bacteria; the former are mobile rods, the latter are spheroids held together in masses by a transparent substance—the glœa of Cohn. Some years ago, Hiller showed that by washing septic bacteria with distilled water they could be immediately deprived of their toxic properties, although the organisms themselves were as lively as ever. The last fact I shall lay before you is the result of some experiments with antiseptics by Anders. He took a fluid of proved septic properties, and added salicylic acid in quantity sufficient to act as a germicide, and found that it was still as active as before. The same result was obtained when chlorine was used. The amount of antiseptic used was proved by previous experiments to have no physiological action of its own to interfere with the result; and the efficient action of the antiseptic on the bacterial solution was shown by its sterility by the physiological test.

MEDICAL ASPECTS OF THE WAR.

WE have been favoured by Lord Blantyre with the following:—

Consul Zohrab to Lord Blantyre.

"Erzeroum, Nov. 11th, 1877.

"Had you seen your surgeons working last Friday (9th), I am sure your lordship would have been highly gratified at the praiseworthy manner in which they were carrying out your wishes. The assault on the eastern forts (close to my house) commenced at 4.30 A.M. At 7 A.M. they were posted in the most favourable position for receiving and dressing the wounded on their way to the hospitals. They worked hard at that spot till 1 P.M., and then went up to the battlefield to save those who could not be moved from the ground without previous surgical aid. From the ground they hastened to the hospital, and there laboured till late into the night. Yesterday and to-day their work has been very hard, but they are willing and cheerful labourers, and their conduct here has earned universal praise and gratitude. Every wounded man begs to be taken to the English doctors. Your lordship may imagine what the work was, for we had more than 2000 wounded on Friday, and the wounds were terrible."

The surgeons alluded to were four—Doctors Featherstonhaugh, Guppy, Pinkerton, and Denniston.

One of the surgeons who arrived at Erzeroum on the 4th writes on the 14th November:—"Since I arrived I have extracted twelve bullets, amputated two arms and two legs. To-day I amputated a captain's thigh, at his urgent request. It is nearly hopeless, but now he has a chance of life, which he had not before the operation. Besides these, I have taken off many fingers, and unfortunately there is a prospect of several other operations among the patients under my charge. The others are equally busy, and I can assure you our efforts are greatly appreciated by all the soldiers, both wounded and whole."

Another surgeon writes:—"Some of the wounds are simply frightful. The reason we got so few bullets on Friday (9th) was that as the fighting was at very close quarters the wounds were right through the body or limb. November 13th: To-day we attended 231 cases in the hospital, besides many townspeople who came to have their wounds looked after."

Correspondence.

"Audi alteram partem."

"AMPUTATION AT THE HIP BY A NEW METHOD."

To the Editor of THE LANCET.

SIR,—The method of amputation at the hip described by Dr. Foulis certainly gives a greater facility for treating the wound antiseptically than is afforded by the ordinary mode of operating. That the difficulty in the latter case can, however, by a little extra care, be overcome, is evidenced by the following case.

On May 6th, 1876, Professor G. H. B. Macleod performed amputation, by transfixion, at the hip, for malignant disease of the femur in a girl aged eleven, who came under his care in the Glasgow Western Infirmary some days previously. The hæmorrhage was efficiently commanded during the operation by digital pressure. The wound was thoroughly swabbed out with a solution of chloride of zinc (thirty grains to the ounce), a drainage tube was left in the outer angle of the wound, and the flaps brought into perfect apposition by a number of sutures. A narrow strip of protective, perforated at one end for the tube, was laid along the wound; over this was placed some loose wet gauze, particularly at the inner part of the wound; and enveloping the whole was a large carbolic gauze dressing, the inner margin of which—that next the anus—was bound down to the skin by means of a piece of gauze charged with collodion, and extending from above the pubis in front to a level with the upper part of the sacrum behind. This was further strengthened by fastening, in the same way, the layers of bandage which passed over this part of the dressing. Thus a partition, as it were, was raised between the anus and the wound, which effectually prevented anything getting beneath the dressing.

The wound maintained an aseptic character throughout, was free from all signs of irritation, and gave vent to a very scanty sero-purulent discharge, which was perfectly "sweet." On the fourth day a large part of the wound was united, union was almost complete on the fourteenth day, and on June 13th the innermost part of the wound was quite closed by a healthy, firm, linear cicatrix. The patient rallied quickly after the operation, was able in a day or two to take a fair amount of nourishment, and enjoyed refreshing rest at night. Her temperature after some days wavered about the normal, was generally higher in the evening, and on two or three occasions reached 102°. She was dismissed well on June 30th, the fifty-fourth day after operation.

I understand that more recently Prof. Macleod had a case which proved quite as successful under the same antiseptic precautions.

* The use of collodion for retaining antiseptic dressings in position is noted by Mr. Lister in his "Recent Improvements in Antiseptic Surgery" (THE LANCET, May 1st, 1875), as of special benefit in wounds about the head and face, while here it played an important part in the antiseptic treatment after amputation at the hip-joint.

I am, Sir, faithfully yours,

Glasgow, Dec. 8th, 1877. ROBERT MOFFATT.

AN APPEAL FROM ROUMANIA.

To the Editor of THE LANCET.

SIR,—As the wife of a physician, will you allow me, through your columns, to appeal to the wives, daughters, and sisters of other professional men, and to ask them to send me by post contributions for our bazaar in aid of the widows and orphans of Roumanian soldiers killed in battle?

We have a hard winter before us, wood is very dear, and the country much impoverished. The most trifling contributions of useful and ornamental articles will be thankfully received by Mrs. Mansfield, British Residency; by Rev. Mr. Klimhin, Strada Olten; and by myself. Parcels should be sent off immediately, as the sale will take place the last day of this year. Books, music, photographs, lace, embroidery, needles, &c., will sell well.

Postal union rate of postage. Anything valuable should be *registered;* the cost is fourpence.

Some of your readers may be glad to know that the small hospital I have been able to establish and support, mainly through the generosity of English friends, is working well. Though we have had some severe cases, we have not had one death, and our poor men are very grateful.

Apologising for trespassing on your valuable space,

Believe me, Sir, faithfully yours,

3, Strada Fortuna, Calmata, Bucharest. E. B. MAWER.

Obituary.

FRANCIS HAWKINS, M.D.

THIS venerable and well-known member of the medical profession expired on the 13th inst., at his residence, Ashley-place, Victoria-street, in his 84th year.

The deceased gentleman was a son of the Rev. Edward Hawkins, and a grandson of Sir Cæsar Hawkins, serjeant-surgeon to his Sovereign, and surgeon to St. George's Hospital. His portrait by the celebrated Hogarth is well known to visitors to the College of Surgeons. His surviving brothers are the Provost of Oriel College, Oxford, and the senior serjeant-surgeon to the Queen.

Dr. Hawkins received his preliminary education at the Merchant Taylors' School, from whence he was elected a fellow of St. John's College, Oxford, in 1812, and only the following year gained the Newdegate Prize; and in 1816 was in the second class both in classics and mathematics. Immediately afterwards he commenced his professional studies at St. George's Hospital, graduated M.D. Oxon. in 1823, and the following year was admitted a Fellow of the Royal College of Physicians. Soon afterwards he was elected physician to the Middlesex Hospital, and delivered lectures there on medicine from 1841 to 1846. His great uncle, Mr. Pennell Hawkins, another serjeant-surgeon, had previously been surgeon to the same institution. It was perhaps the next appointment which brought him more particularly before the profession—viz., as Registrar of the General Medical Council on the establishment of that institution in 1858, and which he only resigned about a year ago. He was an "Elect" of the Royal College of Physicians, the body who formerly elected the president; and also and for some time the Registrar, which position he resigned on his appointment to the above office, when he was succeeded by Dr. Pitman, now so worthily holding that appointment. He delivered the Lumleian and Croonian Lectures, and was also Harveian Orator. As one of the Censors of the College he was *ex officio* a trustee of the Hunterian Collection in the possession of the Royal College of Surgeons, in which he ever took the warmest interest.

On the establishment of King's College, London, in 1830, he was appointed Professor of the Principles and Practice of Medicine in that institution, which post he resigned in 1836, when he was succeeded by Sir Thomas Watson, Bart. He was physician to the Royal Households of William IV. and of Her present Majesty; physician also to their Royal Highnesses the late Duke of Cambridge and Duchess of Gloucester. He was an excellent classical scholar, as testified by his Harveian Oration. Dr. Hawkins had not contributed much to the literature of medicine, a work on "Rheumatism and Diseases of the Heart" being, we believe, all he had published. He was much valued for the high tone and gentlemanly manner with which he practised his profession, and for many years took an active part in the affairs of the Royal College of Physicians.

Dr. Hawkins married a daughter of Sir John Vaughan, a brother of Sir Henry Halford, so long the president of the College of Physicians. By this lady he had three sons, one of them an eminent member of the Chancery Bar, and two who are clergymen.

WILLIAM STEWART TRENCH, M.D. EDIN.

LAST week we briefly announced the death of Dr. Trench, of Liverpool. It had been well known for some time that Dr. Trench's health was in a very precarious and uncertain state, due to heart disease. In consequence of this he was compelled about a year ago to resign his office as medical officer of health for Liverpool, when he was succeeded by Dr. J. Stopford Taylor, who had previously acted as deputy medical officer of health for the borough.

The illness and resignation serve to mitigate the sense of loss which the death of such a man creates. But, nevertheless, the loss is great both to the profession and the public. Liverpool, whether the Town Council of the borough likes it or not, is a conspicuous place, and up till now it has been conspicuously unhealthy. It has served as the great illustration of the evils that attach to bad physical conditions—overcrowding, precarious employment, immigration of strangers, drunkenness, &c. But we are apt to forget that the world would never have known the dark places of Liverpool as it does know them but for the fact that Dr. Trench had an eye to see them and a pen that could powerfully represent them. He not only looked at these with a medical eye, but he had a true human interest in the humblest histories that are worked out mutely and pitilessly in the cellars of Liverpool. He carefully considered the case of the poor man who had to maintain the existence of himself and family on 12*s.* a week there. In the report of the important evidence which he gave in 1865 before the sub-committee appointed to inquire into the causes of the excessive mortality, there is a footnote which shows us how minute this consideration was. He says—"I have frequently endeavoured to try how 12*s.* could be appropriated in support of a man, wife, and three children, which is about the average number of dependants on a labourer's wages. Thus—Rent, 2*s.*; 1 cwt. of coals, 7*d.*; bread (24 lb. flour at 1*s.* per 8 lb., 3*d.* baking-powder, and 1½*d.* for barm), 3*s.* 4½*d.*; potatoes (2 pecks at 6*d.* each, equal to a meal of 6 lb. per day), 1*s.*; tea, 2 oz., 5*d.*; coffee, 4 oz., 3*d.*; sugar, 1¼ lb., 6*d.*; butter, dripping, treacle, salt, and pepper, 1*s.* 3*d.*; candles or lamp-oil, 6*d.*; soap, ½ lb., 1½*d.*; meat or fish (during week), 1*s.*; meat for dinner (Sunday), 1*s.*" It is noticeable that no mention is made in this calculation of expenditure on drink, which undoubtedly is an omission. But Dr. Trench, like all men who have deeply studied the drink question, regarded drunkenness, perhaps too confidently, rather as an effect of poverty than as a cause of it. Be this as it may, we publish the foot-note as a proof of how humanely and sympathetically Dr. Trench went into the problems of sanitation in Liverpool. The scientific value of his reports, and of the careful and elaborate data upon which they were based, is a matter of notoriety. They will always take a first place in sanitary literature, not only in point of time, but of merit, and they serve as models upon which health officers base their annual reports. Dr. Trench was born in Jamaica, and

graduated in Edinburgh in 1831. He wrote a thesis at the time of his graduation on Tetanus. His most useful life ended on Dec. 5th.

JOHN MORTON BEAUMONT, M.R.C.S., L.S.A.

ALL those who were acquainted with John Morton Beaumont, either professionally or socially, will hear with great regret of his death, which took place at Foo-chow, in China, on October 1st, after an illness of only four days. Sprung from an old Yorkshire family, which had lived on their estate of Brackley for many generations, Mr. Beaumont inherited the independence and earnestness of character which led his grandfather to leave his home and sever his family ties in order to join John Wesley in his apostolic work. As well as the intellectual power and brilliancy of speech which rendered his father, Dr. Beaumont, eminent as a preacher, he possessed also a talent and enthusiasm for music, which was a heritage of his family.

His professional education was commenced at the Hull School of Medicine in 1854, and completed at Guy's Hospital. After obtaining his diplomas, in 1858 he entered the service of the P. and O. Company, but on his arrival in China he settled at Foo-chow, where he remained until his death with the exception of a two years' visit to England in 1865–7, which he devoted in great measure to the study of eye diseases at Guy's. An extensive and thoughtful reader, simple and truthful to the last degree, warmhearted, cordial, and hospitable, Mr. Beaumont was well fitted to ornament a much wider circle than that within which his lot was cast. But we cannot think his powers wasted, if we reflect on the value of such men as pioneers of civilisation in surgery. He established and vigorously carried on a large native hospital at Foo-chow, in which the torsion of large arteries was successfully practised almost as soon as it was introduced into London surgery, and amongst the reports of the hospital is to be found a series of cases of successful removal of elephantiasis, second only to those reported by Sir Joseph Fayrer.

That Mr. Beaumont was valued at his true worth by his fellow-countrymen in China is proved by the following extract from a private letter, written by H.M. Consul at Foo-chow:—"His death has cast a gloom over the entire community, so greatly was he esteemed. . . . We accompanied him to his last resting-place, the whole community going to see the last of their lost friend."

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentleman was admitted a Fellow of the College on Dec. 17th:—

Grabham, Michael Comport, M.D. Aberd., Madeira.

On the same day the undermentioned gentlemen were admitted Licentiates of the College:—

Ashworth, John Wallwork, Heaton Moor, Stockport.
Blake, William Farewell, Grafton-street East.
Conce, George Augustus, Devonshire-terrace, Kensington.
Cressey, George Henry, St. Bartholomew's Hospital.
Cripps, Edward Charles, Charlwood-street.
Davies, Francis Joseph, Stanhope-street.
Deane, John Richard, St. Mary's-road.
Dingle, William Alfred, Millbrook, Southampton.
Flint, Arthur, Park-hill, Croydon.
Hayman, Sidney Arthur, Epping.
Husband, Walter Edward, St. Bartholomew's Hospital.
Judson, Thomas Robert, Wynell-road.
Meek, John William, Stockwell-park-road.
O'Grady, Wm. Fitzwilliam, Workhouse Hospital, Manchester.
Pain, Alfred, Coultings, Bridgewater.
Parker, George Roger, Granville-square.
Poynder, John Leopold, St. Luke's Hospital.
Proffitt, William John Walthew, Burton-on-Trent.
Smith, Ferdinand Clarence, Albert-street.
Sworder, Horace, Luton.
Wise, Alfred T. Tucker, M.D. Brussels, Sutherland-gardens.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At the last meeting of the Council the following Members were elected Fellows of the College:—

Donald, John, Dep. Inspect.-Gen. of Hospitals, Wilmslow; diploma of membership dated Sept. 1835.
Walker, William N., L.S.A., Tollington-park; June, 1843.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine and received certificates to practise on Dec. 13th:—

Allinson, Henry Calthrop, Lynn, Norfolk.
Brown, John Alexander, Lyndhurst-road.
Candler, William John, Harleston, Norfolk.
Clitherow, Robert Edward, Hornecastle.
Damania, Phirozsha Jamsetjee, Bombay.
Reynolds, Lewis William, Park Villas, Poplar.
Smale, Morton Alfred, Edgeware-road.
Thorpe, Henry Stanley, Hertford.
Wilson, Joseph Henry, Oundle.

The following gentleman also passed the Primary Professional Examination:—

Brookes, Frederick, Charing-cross Hospital.

ROYAL COLLEGE OF PHYSICIANS IN IRELAND.—The following gentlemen obtained the licences in Medicine and Midwifery at the December examinations:—

MEDICINE.—Henry Dodd, Maurice O'Connor Drury, John William Henry Flanagan, Lomenco Pereira Marques, Daniel O'Sullivan, Thos. George White.

MIDWIFERY.—Henry F. Dodd, Maurice O'Connor Drury, John William Henry Flanagan, James Gaussen Mac Neece, Lomenco Pereira Marques, Daniel O'Sullivan, Thomas George White.

THE Library of the Royal Medical and Chirurgical Society will be closed on Monday, Tuesday, and Wednesday, December 24–26.

MR. W. S. STENSON has very generously offered an eligible site, about a quarter of an acre in extent, for the erection of a new building for the Bourton-on-the-Water Cottage Infirmary, Gloucestershire.

THE LOCAL GOVERNMENT BOARD FOR IRELAND have recommended the granting of a sum of £20,000 towards carrying the Artisans and Labourers' Dwellings Act into effect, in one of the areas with which the Corporation of Dublin propose first to deal.

AT a special meeting of the Council of the Royal College of Surgeons in Ireland held recently, Mr. Spencer, a licentiate in surgery of the College, was appointed to succeed the late Dr. Griffiths, as Assistant-Librarian, at a salary of £100 a year. A library porter has also been appointed.

VACCINATION GRANTS.—The following gentlemen have received Government awards for successful vaccination in their respective districts:—Mr. John Evans, £27 (second time), Mr. Richard Lougher, £48 (second time), Mr. Morgan Williams, £17, and Mr. T. G. Horder, £26 5s., all of Cardiff; Dr. Cook, Gateshead, £107 16s.; Mr. M. R. Speirs, Haltwhistle, £8 15s.

PRESENTATIONS.—Mr. George Holman, of Uckfield, was last week presented with a clock and a purse containing £60, the former being inscribed thus:—"Presented, with a purse of £60, to George Holman, Esq., M.R.C.S., L.S.A., by the inhabitants of Uckfield and neighbourhood, on his retirement from professional duties, in recognition of his very valuable medical services and great kindness rendered to so many, particularly to the poor, for upwards of 42 years. Lady-day, 1877."—Dr. Richard Colthurst, on leaving Keynsham, has been presented with a gold pencil-case, purchased by a penny subscription of the poor people of the parish, where he had been Poor-law medical officer for thirteen years.

ST. THOMAS'S HOSPITAL MEDICAL AND PHYSICAL SOCIETY.—This society, one of the oldest of our hospital literary and debating societies, gave its annual *soirée* on Wednesday, 12th inst. It presented an admirable combination of instruction and amusement. On the one hand we would notice an excellent series of specimens of the changes in the spinal cord in hydrophobia and tetanus; some animal and vegetable parasites; and some beautiful specimens of invertebrata, at the centre table. In a neighbouring room Dr. Stone exhibited the magnetic rotation of light, fluorescence, and some other things of general and scientific interest. It was agreeable to miss the paid exhibitor, so usual at microscopical *soirées*. On the other hand, two telephones, fixed in reverse directions, between the library and adjacent room, gave rise to much amusement. The attendance was large, and would have filled the hall at the other end of the building where the prizes are distributed. The officers of the society may be congratulated on their success.

HEALTH OF DUBLIN.—Last week the death-rate in Dublin reached the high figure of 37 per 1000. This excessive mortality the consulting medical officer attributed chiefly to the prevalence of measles and local diseases. The Public Health Committee of the Corporation have ordered that application shall be made to all the medical officers of dispensaries for reports from their various districts on the present high mortality; and that a skeleton map of the city be prepared and issued from time to time, showing by variation in tint the death-rate in each street. Besides this, the Local Government Board have, at the instance of the Public Health Committee, nominated Dr. Mapother superintendent medical officer, who will report monthly on the discharge of their duties by all the sanitary medical officers in the city.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.—At the annual meeting of the Royal College of Physicians of Edinburgh, held on 6th December, 1877, the following office-bearers were elected for the ensuing year:—President: Dr. Alexander Peddie. Council: Drs. Robert Paterson, Alexander Keiller, Daniel Rutherford Haldane, George William Balfour, Andrew Douglas Maclagan, and Angus Macdonald. Vice-Presidents: Dr. Alexander Keiller. Examiners: Drs. Bell, Douglas, R. Paterson, Keiller, Pattison, Haldane, G. W. Balfour, Struthers, Ritchie, Maclagan, Smart, Muirhead, Brackenridge, Macdonald, Wyllie, Tuke, Sinclair, and Affleck, and Dr. Stevenson Macadam, Dr. Patrick H. Watson, Mr. Joseph Bell, Dr. John Duncan, Mr. William Lees, Dr. Arthur Mitchell, and Dr. Henry D. Littlejohn. Treasurer: Dr. John Alexander Smith. Secretary: Dr. John Wyllie. Curator of Museum: Dr. Thomas A. G. Balfour. Librarian: Dr. George W. Balfour. Registrar of Applicants for Licence: Dr. John Wyllie.

Medical Appointments.

BRIZZEL, W. J., L.R.C.S.I. & L.M., has been appointed Medical Officer to the Blue Sisters Benefit Society, Newport, Mon., vice Cooke, resigned.

BROWNE, L., F.R.C.S.Ed., has been appointed Honorary Surgeon to the National Training School for Music.

BURLINGHAM, D. C., M.B., C.M., has been appointed House-Surgeon to the North-Eastern Hospital for Children, Hackney-road, vice Greenwood, whose appointment has expired.

BUTLER, P., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Assistant Resident Medical Officer to the Workhouse, St. Matthew, Bethnal-green.

DAVY, Mr. H., has been appointed a Clinical Assistant to St. Luke's Hospital for Lunatics, vice Craddock, whose appointment has expired.

GORHAM, J. J., M.D., M.Ch., L.M., has been appointed Medical Officer to the Renvyle Dispensary, Clifden Union; also Sanitary Officer, Registrar of Births, Deaths, and Marriages, &c.

GREWCOCK, J. B., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer and Public Vaccinator for the Eckington District of the Pershore Union, at £65 per annum and fees, for three years.

GURDON, E. J., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Hopton and Hepworth Districts of the Thetford Union, Norfolk, vice Morgan, resigned.

GUY, J. R., M.B., C.M., has been appointed House-Surgeon to the Hospital for Sick Children and the Out-door Treatment of Women, Bristol, vice Lewis, resigned.

HAMMOND, C. W., M.D., has been appointed a Physician to the East Suffolk and Ipswich Hospital, vice Chevallier, resigned.

HARRISSON, D., M.R.C.S.E., L.K.Q.C.P.I., & L.M., has been appointed Resident Medical Officer to the Royal Infirmary, Liverpool, vice Paul, resigned.

HEMMING, W. D., M.R.C.S., has been appointed an Assistant-Surgeon to the Central London Throat and Ear Hospital.

HILL, J., L.R.C.P.Ed. & L.M., L.R.C.S.Ed., has been appointed Medical Attendant to the Royal Irish Constabulary, Miltown-Malbay, co. Clare, vice Townsend, resigned.

HOUGHTON, W. B., M.D., M.R.C.P.I., has been selected, and will be formally appointed at the next General Court of Governors as, an Assistant-Physician to the Charing-cross Hospital, vice Barlow, resigned.

HUTCHINSON, J. H., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the Scorton District of the Richmond Union, Yorkshire, vice Cockcroft, resigned.

IRVINE, J. A., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer to the Leeds Amalgamated Friendly Societies Medical Aid Association.

JEAFFRESON, G. E., M.R.C.S., has been appointed Certifying Factory Surgeon for Framlingham and its immediate neighbourhood.

JEFFERSON, J. G., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Senior Resident Medical Officer to the Belfast Royal Hospital, vice Coates, appointed Medical Officer for the Belfast No. 4 Dispensary District.

KINANE, M. K., L.K.Q.C.P.I. & L.M., L.R.C.S.I., has been appointed Medical Officer, Public Vaccinator, &c., for the Moyne Dispensary District of the Thurles Union, co. Tipperary, vice Mullally, resigned, at £120 per annum, £20 per annum as Medical Officer of Health, and fees.

KING, T. B., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Resident Medical Officer to the Workhouse, St. Matthew, Bethnal-green.

MURRAY, J., L.K.Q.C.P.I., M.R.C.S., has been appointed Chloroformist to the Central London Throat and Ear Hospital.

ODLING, E. C., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the No. 7 or Wendover District of the Wycombe Union, vice Baker, resigned.

PLOWRIGHT, C. B., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer of Health for the Freebridge-Lynn Rural Sanitary District, vice the District Medical Officers, whose appointments are about expiring, at £80 per annum from 1st January, 1878, to 24th June, 1879.

REID, T. W., M.R.C.S.E., L.R.C.P.L., has been appointed a Surgeon to the Kent and Canterbury Hospital, vice Hutchings, resigned.

RUSHER, J. G., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer and Public Vaccinator for the Upper Snodsbury District of the Pershore Union, at £50 per annum and fees, for three years.

SHELDON, Mr. T. S., has been appointed a Clinical Assistant to St. Luke's Hospital for Lunatics, vice Poynder, whose appointment has expired.

STEIL, G. R., M.R.C.S., L.S.A., has been appointed an Assistant-Surgeon to the Central London Throat and Ear Hospital.

WAGNER, F., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Workhouse and the fourteen united Parishes of the Canterbury Incorporation of the Poor, vice Hutchings.

WADDINGTON, I., M.D., C.M., has been appointed Medical Officer for the Horton West District of the Bradford Union, Yorkshire, vice Lee, deceased.

WHELER, J. M., L.R.C.P.Ed., L.R.C.S.Ed. & L.M., L.S.A.L., has been appointed Medical Officer and Public Vaccinator to the Matlock District of the Bakewell Union, vice Cash, deceased.

WILKINSON, Mr. O., has been appointed Public Analyst for the Borough of Stockport for one year, vice Rayner, whose appointment has expired, at 10s. 6d. for each analysis except water, and 21s. for each attendance in Court.

WILLIAMS, Mr. D., has been appointed a Resident Clinical Assistant to the Hospital for Consumption and Diseases of the Chest, Brompton, vice Lighton, whose appointment has expired.

WILSON, R. A., M.D., has been reappointed Medical Officer of Health for the Lunesdale Rural Sanitary District, Lancashire, at £25 per annum.

Births, Marriages, and Deaths.

BIRTHS.

BARKER.—On the 18th inst., the wife of Surgeon-Major J. Barker, of a daughter.

CARRUTHERS.—On the 16th inst., at South Norwood, the wife of Dr. Carruthers, of a daughter.

DOWNES.—On the 17th ult., at Rawal Pindi, Punjab, the wife of Dr. Downes, C.M.S., late R.A., of a son.

DREW.—On the 17th inst., at Cotswold House, Egham, Surrey, the wife of W. Thos. Drew, L.R.C.P.Ed. &c., of a son.

DUNLOP.—On the 14th inst., at David-place, Jersey, the wife of Andrew Dunlop, M.D., of a son.

ROBERTS.—On the 14th inst., at Upper Rathmines, Dublin, the wife of Browne Roberts, L.K.Q.C.P.I., of a son.

MARRIAGES.

HOPKINS—FENN.—On the 29th October, at St. Paul's Church, Manora, Kurrachee, by the Rev. Digby Cotes, Surgeon-Major Nathaniel Hopkins, Surgeon, of Kurrachee, to Lucy Vanderzee, the youngest daughter of the late Thomas Harrold Fenn, Esq., of Nayland, Suffolk.

LUCEY—HARDING.—On the 18th inst., at St. Stephen's Church, Kirkstall, near Leeds, by the Hon. and Rev. M. Ponsonby, assisted by the Rev. John Julian, uncle of the bride, Eleanor Anne, second daughter of T. R. Harding, Esq., J.P., of St. Ann's Tower, Headingley, Leeds, to William Cubitt Lucey, Esq., M.D., of Ben Rhydding.

DEATHS.

DOWNES.—On the 15th inst., at White-street, Borough, Charles Downes, M.R.C.S.E., aged 56.

FRASER.—On the 27th ult., at Edinburgh, Colin Alexander Campbell Fraser, L.R.C.S.Ed., aged 43.

HEDLEY.—On the 9th inst., at Woolwich, John George Hedley, L.S.A.L., aged 65.

HUMBLE.—On the 8th inst., at Newcastle-on-Tyne, Thomas Humble, M.D., aged 63.

MACARTNEY.—On the 12th inst., at Pelham-crescent, South Kensington, John Park Macartney, M.D., aged 70.

TROTTER.—On the 17th inst., at Bishopegarth, near Stockton-on-Tees, Charles Trotter, F.R.C.S.E., aged 79.

WHITCHURCH.—On the 12th inst., at Great Barford, Nathaniel Whitchurch, M.R.C.S.E., of Melton Mowbray.

WILLIAMSON.—On the 16th inst., at Cambridge-gardens, Notting-hill, George Williamson, M.D., Surgeon-Major, Madras Native Infantry.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*]

BOOKS ETC. RECEIVED.

Graham's Temperance Guide Handbook and Almanac. 1878.
Dr. C. Letourneau: Biology.
Lyon: Food Tablets.
S. S. Mander: Our Opium Trade with China.
W. Thomson on Phthisis.
Dr. J. Godard: Du Bégaiement et de son Traitement Physiologique.
Dr. Starges: Chorea and Whooping-cough.
Good Words. January.
The Sunday Magazine. January.
E. Frankland: Experimental Researches in Chemistry.
J. Mason: The Annual Summary. 1878.
" The Year-book of Facts. 1878.
E. J. Drury: Chronology at a Glance.

Notes, Short Comments, and Answers to Correspondents.

SPIRIT-DRINKING IN THE ARMY.

UNDER the title of "Rum or No Rum?" Surgeon-Major J. B. Hamilton, M.D., publishes an interesting paper in the *Indian Medical Gazette*, dealing with a question of the very highest importance. Premising that every British soldier in India is entitled at the canteen which is provided for each corps to two imperial pints of malt liquor and four ounces of neat rum daily, the point is raised whether a man who consumes such an amount of alcohol every day may be considered temperate. Dr. Hamilton unhesitatingly answers, No; and he contends that in a climate like that of India the health sooner or later suffers, and the soldier hopelessly breaks down in consequence of the spirit allowance accorded him by the Government. It may be stated that the testimony of medical officers serving in India is generally corroborative of Dr. Hamilton's opinion. The writer does not advocate the immediate stoppage of the issue of rum in canteens of regiments already in India, and accustomed to the allowance; but advises that the liquor should be sold to the canteens in bulk, and retailed in the manner of extra spirits, subject to such restrictions as the commanding officer might deem necessary. With regard to corps landing from England for the first time, Dr. Hamilton recommends that spirits should be absolutely barred from their canteens, and thinks that the men would soon become satisfied with two pints of malt liquor per day. The writer believes that a large proportion of the consumption of spirits and beer in India is due to the want of adequate and regular provision for the supply of cooling drinks in hot weather, and he suggests that every barrack in India should be provided with a bar, at which iced drinks should be always procurable at the trifling charge of one "pice" each glass. There can be no doubt as to the reasonableness and feasibility of Dr. Hamilton's recommendation.

Birmingham.—We do not recommend any physician or surgeon in particular.

A COMPLAINT.

To the Editor of THE LANCET.

SIR,—As the wife of a medical man, may I claim a short space in your valuable journal for the following statement.

My husband, owing to ill-health, went abroad last July, and as the assistant left by him was not suitable, and I was inexperienced in medical affairs, I applied to a well-known physician (a supposed friend) to assist me in making some arrangement whereby I might keep my husband's practice together, and get a living out of it during his absence. He recommended me a relative of his own, and I accepted him in all confidence on the following terms—viz., that for the first three months he was to receive the entire proceeds of the practice (with use of the furnished waiting-room, surgery, and bedroom free), allowing me £1 1s. per week towards the rent of the house, which is heavy, and that at the expiration of this period I was to receive one third of the proceeds. Things went on till the three months were all but finished, when he asked me to extend the time by another fortnight, which I declined doing, and he *then* said he could not sign an agreement with me, being a married woman, and that I had better give him the lease of my husband's house, and of course, with it his practice, which I did not think proper to do, and told him he must leave at the end of a week, giving him four extra days so as not to inconvenience him. When his successor arrived on December 1st to take charge of the practice, he absolutely refused to give him up the books, containing the names and addresses of the patients visited and seen by him, and also the list of engagements for confinements, and has gone into practice next door, put up a brass-plate, and is sending out circulars to my husband's patients, one of which documents I enclose for your inspection. This *may* be legal; but I should like to know whether it is a usual proceeding amongst *gentlemen* in the medical profession, and especially when a young woman is the victim. Is there no redress?

Yours truly,

December, 1877. ——— ———.

The enclosed circular is as follows:—

"Mr. ——— ——— begs to inform Mrs. ——— that he has changed his professional residence from No. — to No. —, ———, where he sees his patients from eleven to one o'clock."

*** If the statements in the above letter are not contradicted, they will serve vividly to show how a gentleman should not deport himself when acting as the *locum tenens* of an absent and invalided brother.—ED. L.

NURSES FOR THE SICK POOR OF DUBLIN.

A WISH having been expressed by members of the profession in Dublin that steps should be taken for alleviating the vast amount of remediable suffering endured by the sick poor who are not eligible for treatment in hospital, it is now intended to supply this want by the establishment of a Home, where, under proper supervision, nurses may reside, and be trained to visit and tend the sick poor in their own homes. Such an arrangement is most desirable, and the practical good which may be obtained by it is almost incalculable. It must, however, be admitted that Dublin has been somewhat dilatory in this matter, as in Liverpool, Belfast, and other large towns similar institutions have been established for several years with the greatest success.

C. G.—A complete account of chyluria is given by Dr. W. Roberts in his work on Urinary Diseases. Our correspondent will find there also references to other writers on the subject.

Mr. Geo. William Burnard.—It is not our rule to answer communications addressed to us by other than medical men.

THE TREATMENT OF HABITUAL DRUNKARDS.

DR. MOORE, medical officer of the County Antrim Prison, has recently published a pamphlet in relation to the treatment of habitual inebriates. In the case of confirmed drunkards, of whom the vast majority of prisoners consists, he suggests that a person once committed should not be allowed at large again until the habit of intemperance is cured. Short terms of imprisonment do not allow the effects of the drink to be eliminated from the system, and liberation from confinement destroys any moral reformation which may have begun. Dr. Moore argues that habitual drunkards should be committed like prisoners under remand, the remand to be for a period of not less than three months; and after being discharged they should be liable to be called upon periodically to prove that they are conducting themselves in a quiet and sober manner, the evidence of this state of things to consist of a certificate from a clergyman, a physician, or three householders, the supervision to last for twelve months. The plan recommended by Dr. Moore is somewhat analogous to that suggested by the Commissioners appointed by the Common Council of Boston to inquire into the punishment of drunkards, referred to by us in a recent number. These gentlemen advise that drunkards should not be committed to prison, but be placed in an asylum for a protracted period, with discretion in the hands of the authorities to grant probationary absence on prescribed conditions.

Mr. F. Mellor.—We cannot name physicians or surgeons for consultation. Apply to a general practitioner, who will advise.

PROFESSIONAL AMENITIES.

To the Editor of THE LANCET.

SIR,—Will you kindly favour me with your editorial opinion upon the following case; and may I ask at the same time that you will publish it in THE LANCET, in order that I may likewise obtain an expression of the opinion of the profession upon it.

For the last nine or ten months, I have been in practice in Wetherby, Yorkshire, where there are two other medical men. One of these, named Dr. Wesley, has, ever since my arrival, treated me with marked cordiality. He last visited me, I believe about Nov. 16th, when his bearing towards me was, as usual, very friendly. From that date to Nov. 25th I had no communication whatever with him. On the night of the 25th I had a midwifery case, in which I found craniotomy necessary (milder means having been tried without success), and the patient being nervous and very tender, I thought it advisable to administer chloroform. Accordingly I sent a note to Dr. Wesley with a request that he would come to my assistance, as I had craniotomy to perform, and required another person to aid me. To this he replied that I must do the best I could without him, for he could not come on account (as he said at the time) of having a confinement of his own which he expected to come on that night. I got another gentleman from a distance of five miles, and proceeded with the operation, which we brought to a satisfactory conclusion. On the following day the husband of my patient received from Dr. Wesley an epistle of which the subjoined is a *verbatim* copy:—

"DEAR SIR,—The other evening I had a note (which I did not take in hand or read), from either you or Mr. Gibson, asking me to go to your house. You cannot wonder at my refusing.

"Mr. Armstrong and I do not recognise a third person in this small place, and he is doing us harm by lowering the profession, and giving his services to people who have defrauded us.

"Besides, if you think fit to prefer a young newly-fledged surgeon (who may have very fair abilities for all I know) to me, who have been in practice *fifteen years*, and taken an infinitely higher degree than he has, it is natural that I should assert myself.

"If you employed him, why should I go? and if he wrote the note through want of confidence in himself, why did he undertake the case?

"If I were living at a distance, and called in consultation to a grave case as a physician (which I am), of course I should have gone at once.

"However, all this is, I think, obvious, and your own sagacity will have made you see it. I hope no bad results have happened, but I know nothing whatever of the case.

"I am, yours obediently,

(Signed) "J. S. WESLEY."

I have Dr. Wesley's consent to publish this letter, and shall be glad if you can find space for it in your next issue.

I am, Sir, yours faithfully,

CHARLES PHILIP GIBSON, M.R.C.S.

Wetherby, Yorks, Dec. 11th, 1877.

*** We should have hesitated to publish the above correspondence, but for the fact of Dr. Wesley's assent to our doing so. We have never read such a letter as his, not to his young professional brother, but to the husband of his neighbour's patient. We perhaps are all apt to think that there is one practitioner too many in our neighbourhood; but to make that a ground of declining professional assistance on an emergency, after every profession of friendship, and to make the refusal to do a friendly act the occasion for writing a letter of disparagement of one's neighbour as "a young newly-fledged surgeon," is conduct very different, we apprehend, from that which Dr. Wesley would like to receive, and, we will add, very different from what he did receive as "a young newly-fledged surgeon." We were all "newly-fledged" once, and we can all remember the luxury of a kindly word and a friendly act of assistance from an established senior. To do the seniors justice, though they may think "a third person" in the place rather *de trop*, they generally sink all feeling of that sort when appealed to for help. We should at least say that it is unprecedented, first to decline help courteously asked for, and then to make such an appeal the basis of a letter to patients showing how foolish they are not to prefer the writer, with his "fifteen years'" experience, and "his infinitely higher degree." We shall not analyse other parts of Dr. Wesley's letter, for we are persuaded that it is not one he will either defend or repeat.—ED. L.

PHTHISIS.

DR. HAYDEN, an eminent Dublin physician, at a late meeting of the Medical Society of the College of Physicians, read a paper on this disease, giving an abstract of 330 cases which had come under his notice during the last twelve years. He recognises three forms—the tubercular, broncho-pneumonic or caseous, and the fibroid. Dr. Hayden found in these cases of phthisis that the males preponderated in the proportion of nearly two to one, which represents the relative proportion in which the disease affects the labouring classes, in which seven-eighths of the cases occurred. The chief symptoms of the first stage, or that of deposition, were stated to be comparative immobility of the infra-clavicular region, with falling in of the supra-clavicular fossa during a full inspiration; the special signs being feeble or interrupted respiratory murmur, prolonged expiration, and increased transmission of the heart-sounds. The stage of softening is shown by coarse and resonant crepitant râles, localised to the apex of one or both lungs, combined with flattening, dulness on percussion, and muco-purulent sputa; whilst the third stage, or that of excavation, was shown by metallic sounds and gargouillement. As regards the curability of phthisis, Dr. Hayden referred to several cases, observed by various physicians, in the third stage which ultimately recovered, one or two having occurred in his own practice, and in the earlier stage he had witnessed several examples. When cod-liver oil cannot be taken, arsenic in small doses, alone or along with Parrish's compound syrup of phosphates, was recommended; and Dr. Hayden has found Dover's powder in five-grain doses the best remedy for the night-sweats—a medicine, if we are not mistaken, first advocated by Dr. Stokes for this distressing symptom.

MIXED NARCOSIS.

OUR "occasional correspondent" at Leipzig writes that three more operations about the face have been performed by Professor Thiersch with the aid of mixed narcosis, the anæsthetic effect being perfect in each instance. In the last of these cases chloroform was given for *eight* minutes before the operation could be commenced, and the patient kept up a muttered conversation while an epitheliomatous growth and a portion of the right cheek were removed, mentioned his name and age, and spat out the blood as directed, but gave no indication of feeling pain. The writer wishes to correct a statement made in his communication which appeared in our number of the 8th inst., to the effect that the mode of anæsthesia in question had been in use only a few weeks. He has ascertained that the discovery was made two or three years ago, and that the method has been employed successfully for some months. Our correspondent also desires to amend the first sentence in the last paragraph of his communication, thus: "If the new mode of producing anæsthesia can be safely employed, it will prove of great advantage."

Mr. D. S. E. Bain acted quite rightly. It is no part of his duty to take the jury to see the dead body.

Dr. T. Clifford Allbutt.—A short communication on the subject will be opportune.

THE ALCOHOL QUESTION.

To the Editor of THE LANCET.

SIR,—I have been loth to prolong the discussion (euphemistically speaking) on the subject of total abstinence; but those who venture to say that teetotalism is best have been so hardly hit, and the discussion has been so one-sided, that I venture, if no better apologist appears, to ask for the insertion of a few remarks.

1. It is necessary to distinguish between *facts* and *impressions*, especially subjective impressions, which are notoriously delusive, and must always be regarded with the gravest suspicion when they are opposed to facts.

2. It is admitted that intemperance abounds, at all ages and among all classes; that there is a vast amount of immoderation which is not called drunkenness, and which is frequently practised in entire good faith, and supposed to be necessary or harmless; that all who take too much did, for a longer or shorter time, first practise moderation, and that a large proportion of intemperates have *drifted* into this habit *by degrees*, and without intending to do so.

3. That this intemperance is more or less a feature of every country and in every century where and when alcoholic beverages have been habitually used. The conclusion is that there is something in the nature of alcohol and something in the nature of man which render universal moderation *impossible*, unless one of these two factors be radically changed. Good houses for all, well-cooked food, universal refinement and education, high moral tone, &c., *may* be universally attained in the course of a few thousand years; but why are we to expect that even then drunkenness will be unknown when we see some who possess all these to an eminent degree, and sometimes deep religious feeling into the bargain, succumb to the insidious influence of alcohol? Meanwhile it is notorious that nothing is hindering the moral and intellectual improvement of the race so much as narcotics, of which alcohol is here most potent. Surely it should be abstained from until a far higher level is reached.

4. But what are the facts? It is a fact that all animate beings below man are healthy and strong without alcohol, and it is acknowledged that they are better without it. It is a fact that whole races of men have been and are abstainers, and have been and are, *cæteris paribus*, among the foremost for physical strength and endurance.

5. It is a fact that wherever two similar bodies of men have been comparable, differing only in the matter of alcohol-drinking, the abstainers have lived longer on the average, have had less illness, and have been capable of as great or greater bodily or mental exertion. Let me refer your readers to the book called "Christendom and the Drink Curse," by the Rev. Dawson Burns, price 6s. (published by Tweedie and Co.), where all details may be seen. I would transcribe them if I dared to trespass so much on your space. He that hath ears to hear, let him hear; till then let him not set us abstainers down for—well, amiable enthusiasts. Individual cases prove nothing either way; but when we see that, *cæteris paribus*, the advantage in large numbers is always on the side of abstinence, we cannot hesitate to believe and to say that there is a natural law at work, and that alcohol is not only not a necessary of life, but prejudicial to the human race. What sensible man is there but believes that carbonic acid is not good for animal life, and does not therefore eliminate it from the atmosphere *as far as he can?* Who would deliberately choose to habitually inhale it?

6. It is a fact that whatever the food value of alcohol, it can never equal that of the sugar from which it is made.

7. It is a fact that alcohol has an anæsthetic influence on the nervous system, which is its chief source both of delight and harm, but which so alters that system as to render suspicious the conclusions which are derived from mere subjective sensations.

8. It is a fact that all narcotics, if habitually taken, so affect the nervous system as to create a sense of want or vacuity if they be not regularly supplied; and this sense of need, or of their supposed value, is absolutely unknown, and they are consequently uncraved for, if their influence has never been felt. They create their own necessity. Witness opium, tobacco, haschish, alcohol, chlorodyne. We must conclude that any desire for them is a proof of abnormality.

9. It is a fact that the young imitate their elders. The women of Sweden are total abstainers; therefore the girls never want strong drink. So with smoking here—*ergo*, if the men did not drink and smoke, the boys would not want to do so, and alcohol might be restored to the apothecary's bottle, *quanto valeat*.

Anyone who will practise abstinence will assuredly find some, perhaps many, follow his example, and in that exact proportion will he diminish the evil consequences of the prevalent use of alcohol, both present and future.

Finally, what real philanthropist would not give up a luxury, would not suffer occasional indigestion (granting the point), shall I say, would not curtail his life, to free his country and race from the incubus of alcoholism?

I am, Sir, yours obediently,

Enfield, Nov. 24th, 1877. J. JAMES RIDGE, M.D. Lond.

P.S.—I may just add that I have cured and reassured so many who were on the point of giving up teetotalism, "because it did not agree with them," without alcohol, that I have a not unreasonable suspicion that a large proportion of such cases are imaginary; the presumption, at least, is against them.

To the Editor of THE LANCET.

SIR,—Your insertion of my letter in your issue of November 17th, giving the result of my personal experience of nine months' abstinence from alcoholic beverages, emboldens me to add a few more lines regarding some other points of the same subject. In doing so I wish to avoid entering into any controversy with either advocates or opponents of total abstinence.

In some things both agree—namely: 1st. That there are some in the community who, *quoad* drink, are simply without self-control. Their only safety is in forcible separation from it. 2nd. That there are others having the same weakness, though not to so severe a degree, who are able to resist it in the main, though with possible lapses, by an artificial barrier, such as a promise, verbal or signatory, or their more formal oath. I fancy everyone must agree to the value of the restraint thus exercised. 3rd. There are others who more rarely are visited with the temptation to indulge, and the majority of these, as also some of the preceding classes, would not spontaneously have indulged had not opportunity, friendly importunity, or other external influences, tempted them. 4th. If this latter class are frequently, instead of occasionally, exposed to temptation, a habit is induced closely resembling that of the first and second classes, and often ending in a state identical with the first class. Can we refuse assent to this? Cannot we all of us bring too many instances of its truth, morally limp as these are; and as one is neither able to lock them up nor to make them "plight their troth," it seems to me a question of the greatest importance to society—for these weaker members are not so rare—that these should not be exposed to unnecessary temptation. And the temptation occurs in many ways.

1st. By our urging persons for various reasons to take such beverages, in the face of their refusal; and though this well-meant old habit has much gone out of vogue, yet many still think they show a want of hospitality unless they almost compel their friends to drink alcoholic beverages.

2nd. Temptation may arise from another cause—the total absence of a substitute; and to urge attention to this point principally it is that I have troubled you with this letter. Let any one of your readers liable to the varied calls of consulting practice try "teetotalism" for a week. He will soon perceive how small a provision has been made for him in the way of substitutes for his former beverages, and how great the advantage the "publican" has over the "total abstainer." Not only this, but in point of expense he will find that unless he confines himself to plain cold water he is mulcted in additional expense if he formerly took malt beverages. When he goes into society he will find plenty of wines of all kinds; but of non-alcoholics nothing but soda-water, Apollinaris, seltzer, and often not even these. Some kinds of water are scarcely safe, at least he is fearful of them, and all are insipid after his cultivation of vinous flavours. How can one expect a person who has a liking for intoxicants, and not influenced by any special restraint, nor holding abstinence as a faith, to withstand the attraction so, to him, alluring on one hand, and to embrace, to him, a shadow so unattractive on the other? Attention to the correction of this important point would, it seems to me, act largely in the direction of temperance.

Then, again, the charges of hotel-keepers have been almost invariably in the opposite direction. In looking for the profit from their wines &c., they regard a customer who takes nothing of that kind as a nuisance. One would expect, however, that in "temperance hotels" we should find some kind of an attempt at a substitute, and that all kinds of non-alcoholic drinks would be at command, or at least that special attention would have been given to coffee, tea, &c. But my experience has not found it so. Why temperance hotels should not be as bright, clean, well found, with best of coffee, tea, &c., and all kinds of pleasant substitutes for wines &c., I am at a loss to explain. Surely if a tithe of the attention which has been given to the production of delicate vinous flavours had been given to other beverages, there would have been sufficient by this time to compete with the alcoholics. Would it be impracticable to compel every one catering for the public to

keep also certain non-alcoholic drinks, the quality of which might be supervised? At any rate, as the case stands now, as I gather from my own experience, persons moving much away from their own homes, and wishing to avoid alcoholic drinks, will find very many impediments in their way, which cannot be very difficult of removal. In discussing this question I think all of us will agree on one point—namely, that at all tables, private and public, at all refreshment-houses and bars, drinks of non-alcoholic kinds, agreeable, wholesome, suitable for the season, and as cheap as alcoholic drinks, should be provided. If this rule were carried out with the care given to other drinks, we should not see a children's party with nothing but wine to drink, nor a railway buffet with "poisonous" sherry as the lightest beverage for summer.

Yours &c.,

December, 1877. J. BRAXTON HICKS.

To the Editor of THE LANCET.

SIR,—I have not followed very closely the correspondence which you have published on the use of alcohol; but I remember that the issue first raised by Mr. R. B. Carter was one of personal experience. As I have had practical experience of total abstinence under the opposite conditions of mental work and physical work, you may deem my opinion worth publishing.

During the last three years of my studentship I did not take alcohol in any form, and the result was satisfactory from a student's point of view, and I think the majority of students may follow the same course with safety and advantage. I passed my examination as soon as my certificates were complete, without having recourse to those external aids which were more necessary to insure success then than they are now. I had, moreover, substantial proofs that my teachers were satisfied with my industry. Since that time I have read and thought more, and have worked for months at a subject which is naturally distasteful to me, as indeed it is to most people—statistics—on the ordinary use of alcoholic beverages, with much greater ease, and with better health; and I am of opinion that the moderate use of alcohol, especially in the shape of light wines, is favourable to mental labour.

Not so with regard to purely physical work. A few years ago, in company with a friend and two servants, I made the very arduous journey of the "North-West passage by land," across the continent of North America from Lake Superior to Vancouver's Island. During the six months of severe physical exertion, through forests, across prairies, rivers, and a "sea of mountains," which this journey occupied, I was a total abstainer from alcohol; and although our food consisted largely of pemmican, and we were exposed to great vicissitudes of climate, my physical powers and general health were perfect. I have since had opportunities of comparing that journey with others of a similar kind in India and Australia while using alcoholic beverages, and I am satisfied in my mind that steady and prolonged physical labour is more easily performed without the use of alcohol than with it. I am well aware that there is nothing new in my experiences or opinions on this subject, for they are similar to those of many others. Their virtue consists in the fact that they are the results of intentional experiments and careful observation of results. To attempt to explain them would occupy more space than you would willingly give me.

I am, Sir, yours truly,

Bolton-row, Piccadilly, Dec. 6th, 1877. C. ROBERTS.

MICHELANGELO ASSON.

IN the death of Asson, Venice deplores the loss of an illustrious surgeon and teacher, and Italy that of a great man of science and of letters. He was born at Verona in 1802. He was surgeon-in-chief to the Hospital of Venice, lecturer on Anatomy to the Royal Academy of the Fine Arts, member of the Venetian Institute and of many scientific bodies in Vienna, Berlin, Paris, and London. "An enthusiastic student of literature and a patriot who hailed the dawn of Italian unity with youthful fervour, he possessed (says *Fanfulla*) that lively and acute intellect which takes up without trouble the most arduous and heterogeneous questions. Neither the esteem of the good nor the consciousness of his own acquirements ever seduced him from that modest reserve which was his guiding principle through the vicissitudes of his life. We read his literary and scientific writings; we heard, now in the University, now at the Academy of the Fine Arts, now at the Venetian Institute his learned and artistic words; we admired that genius of his at once versatile and profound. In a *terzina* of Dante he could gather up the most brilliant scientific varieties, which he would then, with rare ingenuity, develop learnedly and amply. The industry of the man was wonderful, concentrating his mind, as he could, amid adversity and illness, on severe studies, and opening it to the warmest enthusiasms of science and art. His death deprives Italy of a man truly illustrious. An edition of his many papers, medical, scientific, and literary, would be a boon."

Anon.—An advertisement appears in THE LANCET with reference to the supply of calf vaccine lymph.

URINE TEST-CASES.

To the Editor of THE LANCET.

SIR,—Your eulogistic notice of the elegant and ingenious invention of Dr. Batten, to which practical effect has been given by Messrs. Salt, of Birmingham, is amply deserved. The want of a urinary test-case of small dimensions, easily and safely portable, has long been felt. The apparatus of Dr. Batten to a great extent has supplied this want. It has struck me that its efficiency might be much increased by the addition to the case of a small spirit-lamp. Dr. Batten mentions that an ordinary lamp or candle might be employed in heating the tube containing the urine, care being taken that it is inserted in the blue flame. Now it is not always that a blue flame can be discovered in a candle, and with the utmost care the test-tube is apt to be blackened. I suggested the above addition to Messrs. Salt, who kindly adopted it, and have manufactured for me a case with this improvement. The only objection which could be urged to this arrangement is a small increase in the length of the case, necessitating its being carried in an outside coat pocket instead of that of the waistcoat. I think the advantage of the combination with the test apparatus of a smokeless lamp is more than commensurate with the questionable inconvenience of a transfer from the smaller pocket to the larger.

I am, Sir, yours &c.,

Maldon, Dec. 11th, 1877. GEO. PARKER MAY, M.D.

SYRUP OF CHLORAL (LIEBREICH).

To the Editor of THE LANCET.

SIR,—Will you kindly favour us with an opportunity of effacing any erroneous impression which may have been made by the note on Syrup of Chloral (Liebreich) in your issue of Dec. 8th, page 856?

The statement made in the note, that the syrup is prepared in Germany by Prof. Liebreich, is incorrect. The syrup is prepared here by ourselves, as is indeed indicated in our advertisements and on our labels. We agree with you that the assumption that pure chloral cannot be prepared by English manufacturing chemists would appear a most extraordinary one, but would add that such assumption cannot be entertained by anyone who is acquainted with the fact that there is not a single manufacturer of chloral hydrate in the United Kingdom. The question of strength and dose to which you refer seems to us, in a case of this kind, to belong so entirely to the medical profession that we willingly leave it in their hands, the more willingly that both the strength and dose of syrup of chloral (Liebreich) were determined by gentlemen of exceptional experience in the therapeutics of the day.

Yours respectfully,

High Holborn, Dec. 18th, 1877. COREYN, STACEY, AND CO.

*** Unfortunately "the question of strength and dose" is *not* one which belongs "entirely to the medical profession." There is a perilous and most unwise practice rife among the public of taking "chloral" as a domestic medicine. The warning we gave was directed against the risk of misadventure which will be created by the sale to the public of a preparation weaker than the ordinary strength. After using the weak they will probably take the same dose of the ordinary syrup, purchased elsewhere, and incur grave peril to life.—ED. L.

"WAKING" THE DEAD.

THE Roman Catholic hierarchy, in consequence of the many instances of demoralisation and want of due respect which often occur at "wakes," some of these being mere carousals, have at last directed that in future no one is to attend at them except the immediate relatives of the deceased, and no spirituous or intoxicating liquors are to be used in such places, on pain of deprivation of the services of their priests. It is to be hoped that this step on the part of the heads of the Roman Catholic Church in Ireland may have the effect of checking the scandalous and revolting scenes frequently enacted at "wakes."

A. S. P.—Application should be made to Lord Carnarvon or his Secretary, at the Colonial Office, Downing-street, W. It is the best paid of any of the colonial medical services, the salaries ranging up to £1000 a year. There are twenty-three medical officers of immigration districts (for the coolies), who receive from £300 to £900 each. The climate is unfavourable to Europeans, although the heat, for the tropics, is not excessive, seldom exceeding 90° F. in the shade. Living is costly, house-rent especially so. Insects that "graze" on the human body exist in abundance, and form one of the chief discomforts of the colony. Given a good constitution, with abstemious habits, and a man might for some years defy the climate, and save money.

R. L. T.—1. No general rule can be laid down. It should be a matter of agreement between the parties.—2. As a rule it is not desirable to charge for attendance on the wife and family of retired medical officers. There are exceptions, such as the case in which means are ample, and the demand on the medical man's time frequent and inconvenient.—3. It is more professional, when a neighbour is casually from home, to see the patient *for him*. Something depends on the terms upon which the respective medical men live.

Pemberton.—We do not know anything of the person named. The error is in going to such persons. He might be prosecuted under the Medical Act if he uses a false title.

Spasm.—We are obliged for the reference.

COMMUNICATIONS not noticed in the current number shall receive attention in our issue of the ensuing week.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir H. Thompson, London; Dr. J. Langdon Down, London; Dr. J. Braxton Hicks, London; Dr. B. Foster, Birmingham; Dr. A. Wiltshire, London; Mr. Annandale, Edinburgh; Dr. McCall Anderson, Glasgow; Dr. Pierce, Manchester; Mr. Erichsen, London; Dr. Grally Hewitt, London; Mr. Golding Bird, London; Mr. Jay, Andlem; Dr. Heslop, Birmingham; Mr. Bramwell, Nottingham; Mr. Dixon, Dorking; Mr. C. Hawking, Cheltenham; Prof. Humphry, Cambridge; Mr. Somervell, Windermere; Mr. Dougall; Mr. Stewart, Barnsley; Mr. T. N. Dean, Ardwick; Dr. G. W. Grabham, Red Hill; Mr. G. F. White, Kingston; Dr. W. Carter, Liverpool; Dr. E. Tibbits, Bradford; Dr. B. O'Connor, Welshpool; Mr. G. Jackson, Plymouth; Dr. Peter Eade, Norwich; Dr. H. O. Taylor, Nottingham; Dr. J. F. M'Veagh, Dublin; Dr. C. Warden, Birmingham; Mr. W. Odell, Hertford; Dr. J. Smith, Dumfries; Dr. J. C. O. Will, Aberdeen; Dr. Clifford Allbutt, Leeds; Dr. E. Watson, Glasgow; Mr. E. Atkinson, Leeds; Dr. Duncanson, Edinburgh; Dr. P. H. Watson, Edinburgh; Dr. Beresford, Oswestry; Mr. J. Sherburn, Hull; Mr. Boyd, Kingstown; Dr. J. Monson, Jersey; Dr. A. B. Shepherd, London; Mr. E. H. Carter, Chelmsford; Dr. A. D. Davidson, Aberdeen; Mr. T. W. Williams, Birmingham; Dr. S. Sloan, Glasgow; Dr. D. J. Brakenridge, Edinburgh; Mr. W. Miller, Londonderry; Mr. T. R. Jessop, Leeds; Dr. W. Macewen, Glasgow; Mr. A. A. W. Johnstone, Brighton; Dr. F. Buzzard, Northampton; Mr. J. H. Houghton, Dudley; Mr. E. Hooper May, Tottenham;

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LETTERS, *each with enclosure*, are also acknowledged from — Dr. Jenkins, Powick; Dr. Noble, Alloa; Mr. Rooke, Bayswater; Mr. Drew, Egham; Mr. Kempe, London; Mr. Campion, Louth; Dr. Murdoch, Magherafelt; Mr. Heath, Calne; Mr. Duncan, Glasgow; Messrs. Beaman & Co., Wigan; Dr. Cooke, Bognor; Mr. Neligan, Dublin; Mr. Parrott, Hayes; Mr. Coales; Messrs. Harthill and Co.; Dr. Davies, Ebbw Vale; Mr. Jones; Mr. Lee, Warrington; Mr. May, Tunstall; Mr. Creasy, Sevenoaks; Practitioner; K. D.; A. D., Kilburd; Medicus, Swaffham; J. W.; W. I.; C. W. W.; C. H.; M. S. H.; E. N. S.; T. C., Hampstead; L. L., Bow.

Sheffield Independent, Guardian, Shield, Colonies and India, Edinburgh Courant, Argus, Western Morning News, Sheffield Daily Telegraph, Middlesex Chronicle, Church of England Temperance Chronicle, Sunday Times, Sheffield and Rotherham Independent, Cork Constitution, Newcastle Daily Chronicle, &c., have been received.

METEOROLOGICAL READINGS

(Taken daily at 9 a.m. by Steward's Instruments.)

THE LANCET OFFICE, DEC. 20TH, 1877.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia. in Vacuo	Max. Temp. Shade	Min. Temp.	Rainfall.	Remarks at 9.30 A.M.
Dec. 14	30·20	N.W.	36	37	...	43	32	...	Fine
,, 15	30·55	N.W.	35	36	...	47	31	...	Foggy
,, 16	30·43	N.W.	44	46	...	50	35	...	Cloudy
,, 17	30·41	W.	45	47	...	49	44	...	Foggy
,, 18	30·54	W.	41	43	...	46	41	...	Foggy
,, 19	30·59	N.W.	34	35	...	40	30	...	Foggy
,, 20	30·69	S.E.	41	44	...	45	33	0·04	Overcast

Medical Diary for the ensuing Week.

Monday, Dec. 24.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

Tuesday, Dec. 25.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, Dec. 26.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

Thursday, Dec. 27.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
ROYAL INSTITUTION.—3 P.M. Prof. Tyndall, "On Heat, Visible and Invisible." (Juvenile Lectures.)

Friday, Dec. 28.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
QUEKETT MICROSCOPICAL CLUB.—8 P.M. Mr. Marcus M. Hartog, "On the Investigation of Floral Development."

Saturday, Dec. 29.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Prof. Tyndall, "On Heat, Visible and Invisible." (Juvenile Lectures.)

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